Video Cassette Recorder

NV-J45 Series

Operating Instructions

VHS
PAL NTSC 4.43

Before attempting to connect, operate or adjust this product, please read these instructions completely.

VQT4050

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Information for Your Safety

IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

NV-J45A : Australian model
NV-J45EA: New Zealand model

FOR YOUR SAFETY

■ **DO NOT REMOVE OUTER COVER.**
To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

HQ (High Quality) Picture System

Video recorders carrying the HQ symbol mark feature the new VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

Cautions

Please read these cautions before you operate this VTR.

Cassette Compartment Door

When first unpacking the unit, you may notice that the cassette compartment door is partially open. This condition is due to the operation of a safety device designed to protect the unit from vibration during shipment; it is not a malfunction. When the AC mains lead is connected to a mains outlet, the door will return to its original position.

Avoid Sudden Changes in Temperature

If the VTR is suddenly moved from a cold place to a warm place, moisture may form on the tape and inside the VTR. In this case, the Dew Indicator " ☐ " will flash on and off and the VTR will not operate.

Humidity and Dust

Avoid places where there is high humidity or much dust, which may cause damage to internal parts.

Do Not Obstruct the Ventilation Holes

The ventilation holes prevent abnormal increase in temperature. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

Keep away from High Temperature

Keep the VTR away from extreme direct heat such as direct sunlight, heating radiators, or closed automobiles.

Keep Magnets away

Never bring a magnet or magnetized object near the VTR because it will adversely affect the performance of the VTR.

No Fingers or Other Objects Inside

Touching internal parts of this VTR is dangerous, and may cause serious damage to the VTR. Do not attempt to disassemble the VTR. There are no user serviceable parts inside.

Keep Water away

Keep the VTR away from flower vases, tubs, sinks, etc. CAUTION: If liquids are spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, consult qualified service personnel.

Lightning

To avoid damage by lightning, disconnect the aerial plug from the VTR.

Cleaning the VTR

Wipe the VTR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. And do not use compressed air to remove dust.

Stacking

Place the VTR in a horizontal position, and do not place anything heavy on it.

Video Head Clogging

The video heads are the means by which the recorder places picture signals on the tape during recording, and reads picture signals from the tape during playback. This VTR is equipped with Auto Head Cleaning Function. However, if the unit is used over extremely long periods of time, these heads may still become dirty and clogged. In such a case, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, during the playback of a tape, the sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such a symptom case occurs, have the recorder checked by qualified service personnel.

If Dew Condensation Forms in the VTR

Condensation may form in the VTR if:

- The VTR is in a room where the heater has just been turned on.
- The VTR is in a room with steam or high humidity.
- The VTR is brought from cold surroundings into a well-heated room.
- The VTR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.

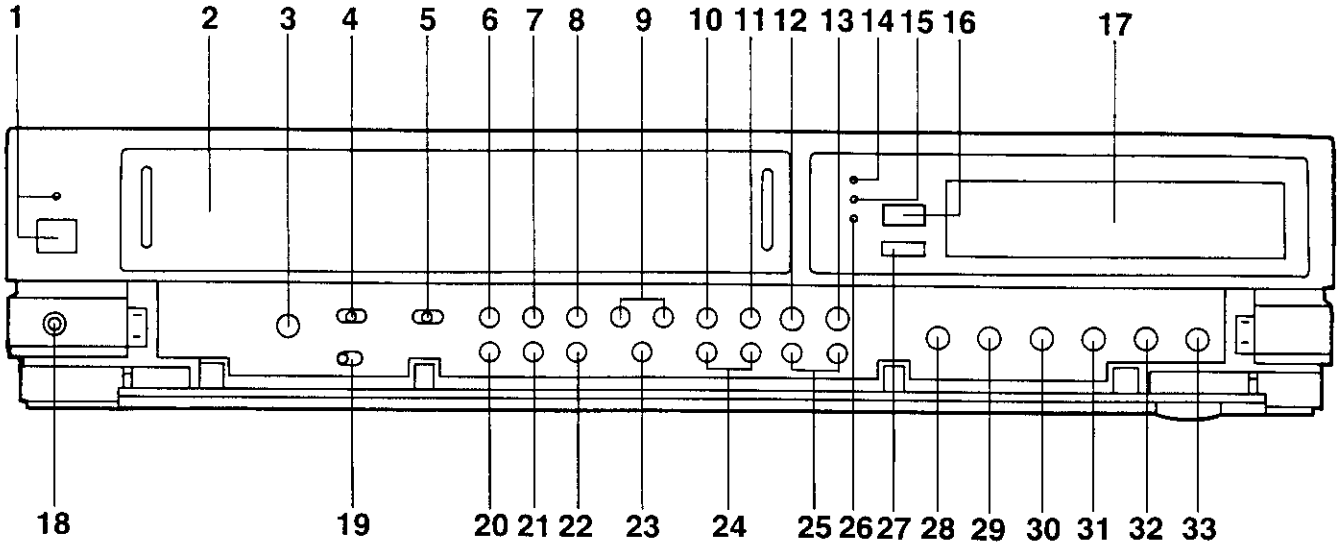
When dew forms in the VTR: (Refer to page 5.)

The Dew Indicator " ☐ " on the Multi-Function Display will flash on and off and all the function buttons are made non-operational to protect the tape and the video heads. When the Dew Indicator flashes, wait until this indicator disappears.

- If dew condensation forms inside the VTR while the VTR On/Off Switch is off, it will turn on automatically and the Dew Indicator will flash on and off. As soon as the dew condensation has been dissolved, the VTR will turn itself off again.

Controls and Components

FRONT



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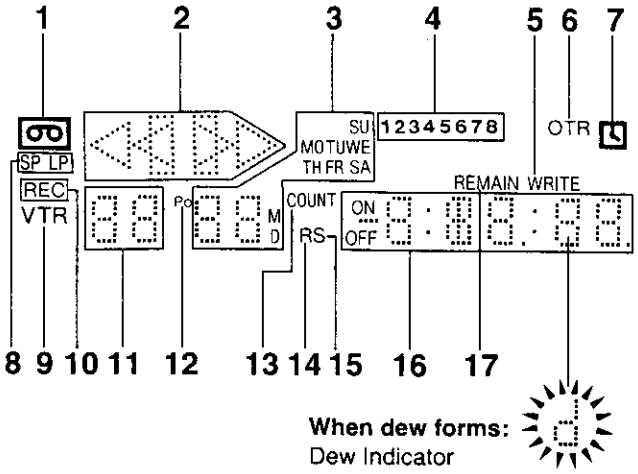
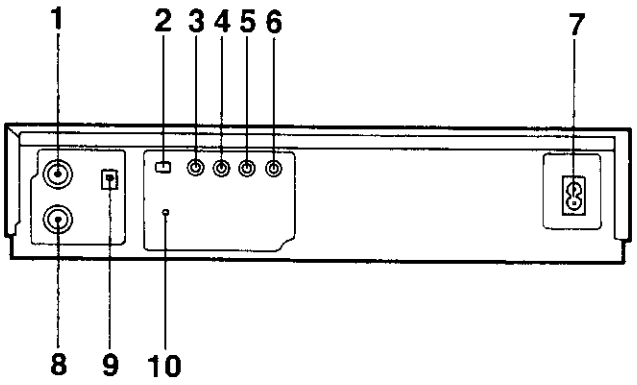
Controls and Components (Cont'd)

Multi-Function Display



When dew forms:
Dew Indicator

REAR



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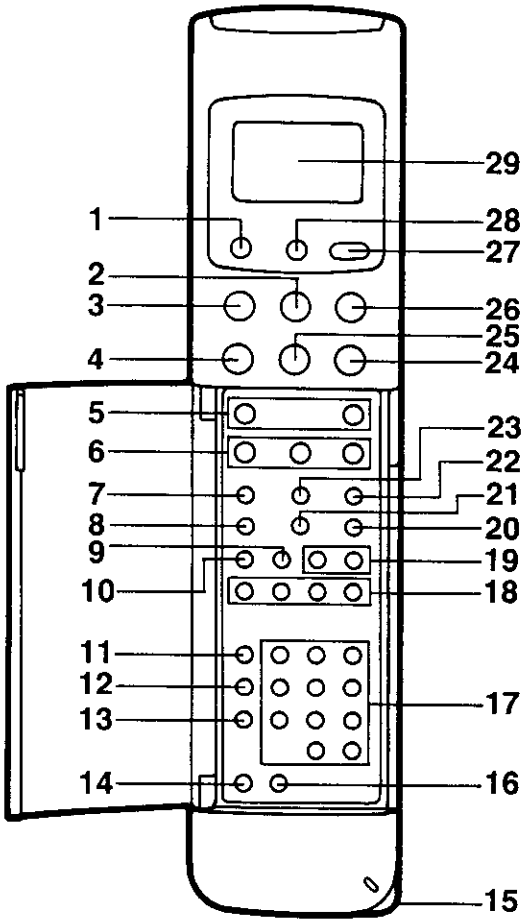
Infra-Red Remote Controller



1 VTR On/Off Button

2 Stop Button (■)

3 Pause/Still Button (❚❚)

4 Rewind ◄◄/Review ⇦ Button

5 Record Buttons

6 Slow Buttons

7 Clock/Counter Selector

8 Monitor Button

9 Time Search Button

10 Index Button

11 Programme Button

12 Next Button

13 Tape Speed Selector

14 Timer Record Button

15 Bar Code Reading Section

16 Clear Button

17 Programme Position (Channel) Selector Buttons

18 Auto Play Buttons

19 Tracking/V-Lock "+" and "–" Buttons

20 Input Signal Selector

21 VTR/TV Selector

22 Reset Button

23 Tape Remain Button

24 Fast Forward ►►/Cue ⇨ Button

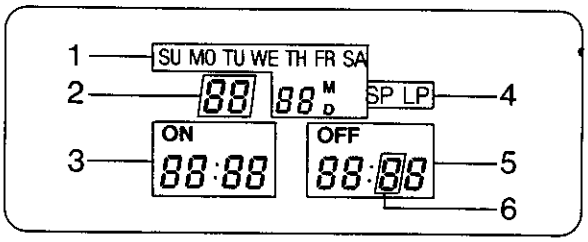
25 Play Button (►)

26 Still Advance Button (⏭)

27 Transmit Button

28 Digital Scanner On/Off Button

29 Display



1 Date Display

2 Channel Display

3 Start Time Display

4 Tape Speed Indicator

5 End Time Display

6 Check Indicator

Power Source for the Remote Controller

■ The Remote Controller is powered by 2 IEC "R6" size batteries. The life of the batteries is about one year, however, it depends on the frequency of use. Inspect and if necessary, replace the batteries once a year.

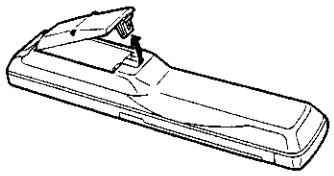
CAUTION FOR BATTERY REPLACEMENT

- Load the new batteries with their polarities (⊕ and ⊖) aligned correctly.
- Do not apply heat to batteries, or internal short-circuit may occur.
- If you do not intend to use the Remote Controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new batteries together. (Also never use an alkaline battery with a manganese battery.)

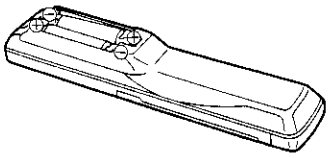
Infra-Red Remote Controller (Cont'd)

Load the batteries as follows:

1 Remove the battery compartment lid.



2 Place the batteries in the battery compartment as indicated inside the battery compartment.



3 Replace the lid.

How to Operate the Remote Controller (Digital Scanner)

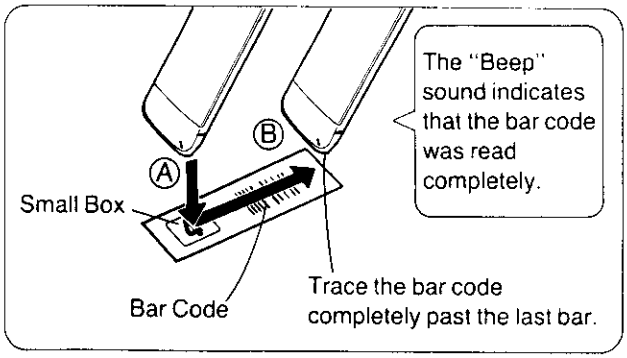
Press the Digital Scanner On/Off Button to "ON".

- If no operation is performed for more than 25 seconds (4 minutes during setting of the clock time), the scanner will automatically switch over to the power-saving standby condition and the lamp will go off. (In this case, if bar codes have already been read but not yet transmitted to the VTR, the data will be cancelled.)
- When the lamp is not lit, press the button to turn it "ON" again.

Tracing the Bar Codes

(A) Place the Remote Controller on the Small Box.

(B) Trace the bar code quickly in the direction of the arrow.


The "Beep" sound indicates that the bar code was read completely.
Small Box
Bar Code
Trace the bar code completely past the last bar.

Note:

The bar codes "VTR 1" and "VTR 2" in the column "REMOTE MODE" on the Programming Sheet cannot be used with this unit.

- If the bar code "VTR 2" is traced by mistake, transmission to the VTR becomes impossible. To remedy this condition, trace the "VTR 1" bar code. (The indication "VTR 2" in the Display will disappear.)

- Treat the Programming Sheet with care. If the sheet gets dirty or scratched, the bar code reading may become impossible.
- Protect the Remote Controller from strong shocks and vibration. Keep it away from water and places with high temperature and humidity.
- If the bar code is traced slowly, it cannot be read correctly.
- When there is no "Beep" sound, the reading of the bar code is incomplete. Trace the bar code again.
- When using the Programming Sheet, put it on flat surface: Reading the bar codes while holding it in your hand or bending it, may result in incorrect operation.
- Do not deviate from the bar code, nor stop tracing halfway.

Note:

- The infra-red beam should be transmitted directly at the Infra-red Remote Control Receiver on the front of the VTR.
- Direct sunlight may interfere with the beam.
- The lightsensing angle of the Infra-red Remote Control Receiver in the VTR is about 30° for each side from the centre.
- The unit should be used within a range of about 7 meters from the front of the VTR.

Recommendation

After the programming of timer recording(s) is completed, press the Digital Scanner On/Off Button so that the indications in the Display disappear, in order to save battery power.

When the Bar Codes Cannot be Read

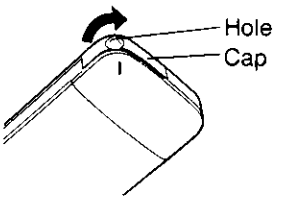
Although the lamp in the tip of the Bar Code Reading Section lights up:

- No figures appear in the Display
- No beep sounds is heard;

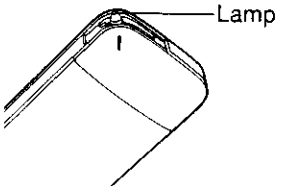
The tip of the Bar Code Reading Section is probably clogged with dirt.

Cleaning

1 Remove the cap of the Bar Code Reading Section.
- Remove dirt and dust from the hole of the cap.



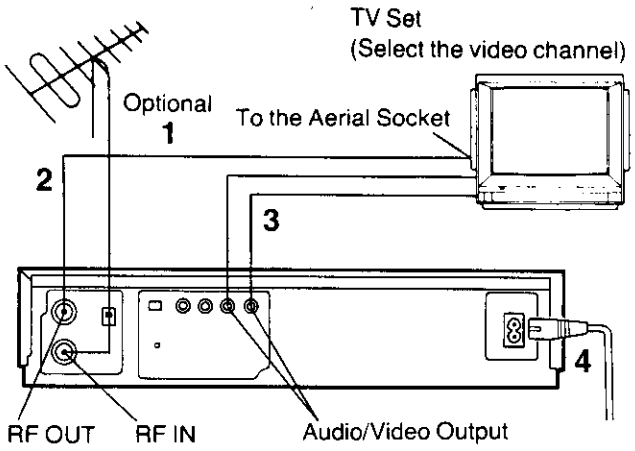
2 Gently wipe the tip of the lamp with a soft cloth.
- Reattach the cap by inserting it until it locks with a click.



Installation

Connection to a TV Set

NV-J45A:
FOR YOUR SAFETY
Install any external aerial to AS 1417.1.



1 Connect the external aerial to the RF Input Socket on the VTR.

2 Connect the aerial terminal on your TV set to the RF Output Socket on the VTR with the supplied DIN-DIN Coaxial Cable.

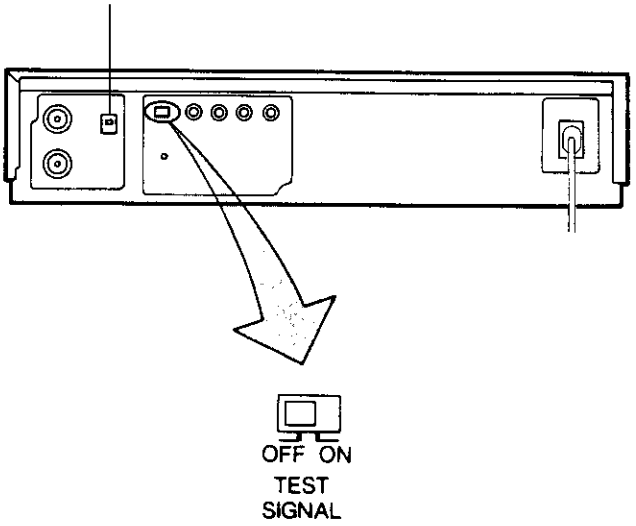
3 If the TV set is equipped with separate video and audio input sockets, it is recommended to connect the VTR to the TV set with separate video and audio cables (not supplied).

4 Connect the AC Mains Lead to the AC Mains Socket of the VTR to the mains outlet.

Tuning the TV Set to the Video Playback Channel

The adjustments described on this page are not necessary, if the VTR is connected to the TV set via the Video/Audio output sockets.

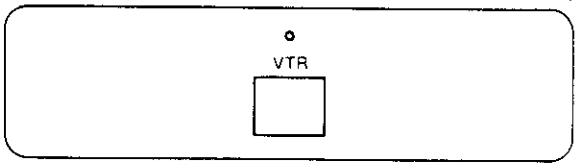
Video Playback Channel Selector
This switch is used to select the video playback channel which is not occupied with any TV station.(NV-J45A: 0 or 1; NV-J45EA: 2 or 3)



1 Turn the TV set on and select the AV programme position or another programme position that is not occupied by any TV station.

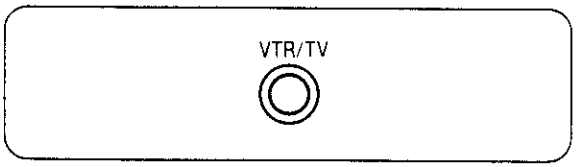
2 Press the VTR On/Off Switch to turn the VTR On.

(FRONT SIDE)



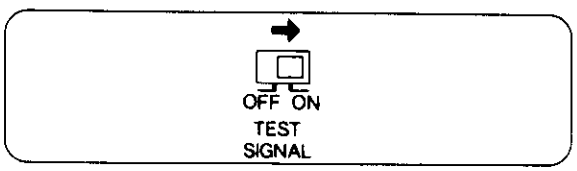
• The corresponding indicator lights up.

3 Press the VTR/TV Selector to "VTR" position.

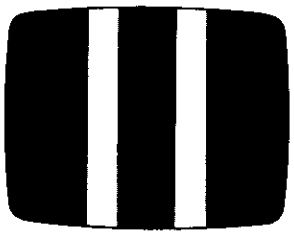


• VTR Indicator will appear in the Multi-Function Display.

4 Set the Test Signal Switch to "On".

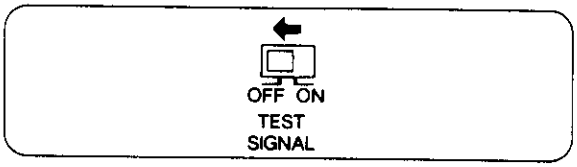


5 Tune your TV to VHF channel as shown below. Confirm by your TV that the received test pattern is as shown below.
NV-J45A: VHF channel 0 or 1*
NV-J45EA: VHF channel 2 or 3



NV-J45A only
*In some areas channel 0 may be used by local TV station. In this case switch to channel 1.

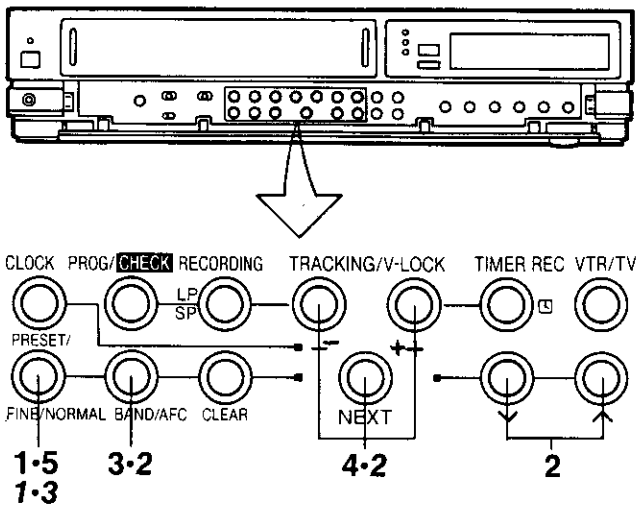
6 Set the Test Signal Switch to "Off". Your TV is now ready to receive the RF output signal from the VTR.



7 To check, playback a pre-recorded tape and comfirm that the picture quality is satisfactory.

Setting the Tuner in the VTR

The tuner in the VTR makes it possible to receive TV broadcasts and to record these programmes without having to turn on the TV set.



Preparation

- Turn the TV set on and select the programme position (channel) which you have tuned to the video playback channel.
- Press the VTR On/Off Switch to turn the VTR on.
- Set the VTR/TV Selector to "VTR".

PRE-PROGRAMMED TV CHANNELS (NV-J45A)
The local TV transmission channels 2, 7, 9 and 10 are factory-preset in this VTR. That is, if you can receive television broadcasts on VHF channels 2, 7, 9 and 10, these are already tuned on the programme positions with the matching numbers. However, it is possible to cancel these presettings and tune the local TV broadcast channels on any desired programme positions.
For alternative settings and tuning of additional TV broadcasts channels, follow the Tuning Procedure below.

Tuning Procedure

1 Press the Preset/Fine/Normal Button on the VTR.
The indication on the Multi-Function Display changes from the clock indication to the position indication.

2 Press the Channel Up or Down Button to select a programme position (channel) which you want to tune to a TV station.

3 Press the Band/AFC Button to select the "I", "III" or "U" position.

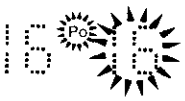
Display of the programme positions 1–99

Indication of the selected TV band

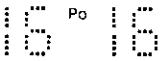
	VHF		UHF
	I	III	U
NV-J45A	0–5	5A–11	21–69
NV-J45EA	1–3	4–11	21–69

The tuner in the VTR can be preset with up to 99 stations.

4 Press the "+" or "–" Button until the picture of the desired station on your TV is satisfactory.
- If the "+" or "–" Button is pressed while pressing the Next Button, the stations will change quickly.



During the station search (The position indication flashes on and off.)



Tuned condition

- The tuned station is automatically memorized.

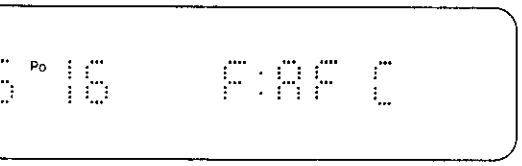
Repeat steps 2–4 for each channel you want to tune to a station.

5 Press the Preset/Fine/Normal Button twice.
The indication on the Multi-Function Display changes back to the previous indication.

Fine Tuning Procedure

If fine tuning is necessary, for example for a weak station which is close to a strong station:

1 Press the Preset/Fine/Normal Button twice.



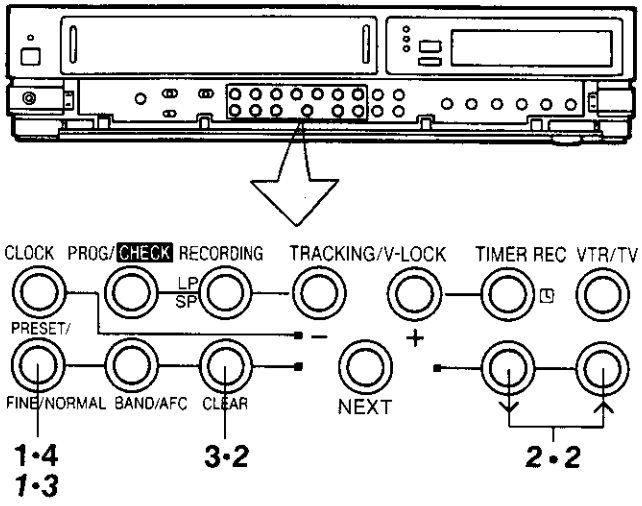
2 Press the "+" or "–" Button to obtain the best tuning condition.

- "AFC" Indicator will not be displayed.

- To return the tuning to its former state, press the Band/AFC Button.

3 Press the Preset/Fine/Normal Button.

Setting the Tuner in the VTR (Cont'd)

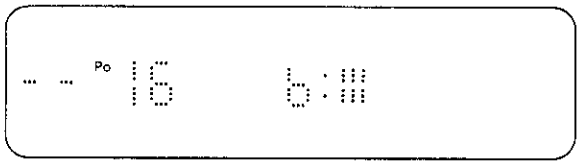


Blanking of Unoccupied Programme Positions (Skip mode)

1 Press the Preset/Fine/Normal Button.

2 Press the Channel Up or Down Button to select a programme position (channel) which you do not want to tune to a TV station.

3 Press the Clear Button ("– –" will be displayed in the Programme Position Indication).



- Repeat steps 2 and 3 for any programme positions on which no stations are to be tuned. Afterwards, these programme positions will be skipped during Up/Down selection of the programme position.

4 Press the Preset/Fine/Normal Button twice.

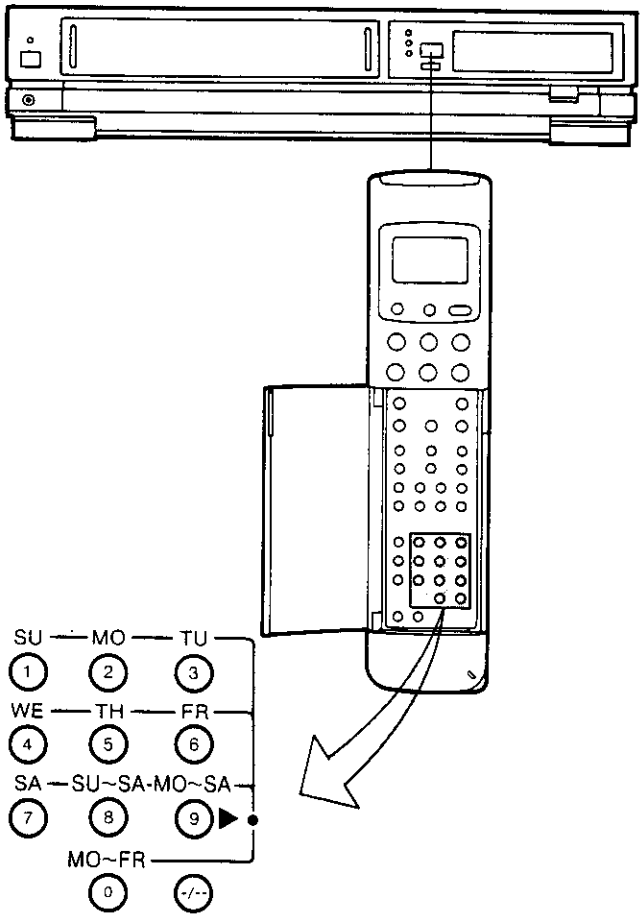
Cancelling the Clear Function (Blanking) (Skip)

1 Press the Preset/Fine/Normal Button.

2 To cancel the blanking of a programme position, select that programme position on the VTR and then press the Clear Button.

3 Press the Preset/Fine/Normal Button twice.

How to Select the Programme Position (Channel) on the Remote Controller



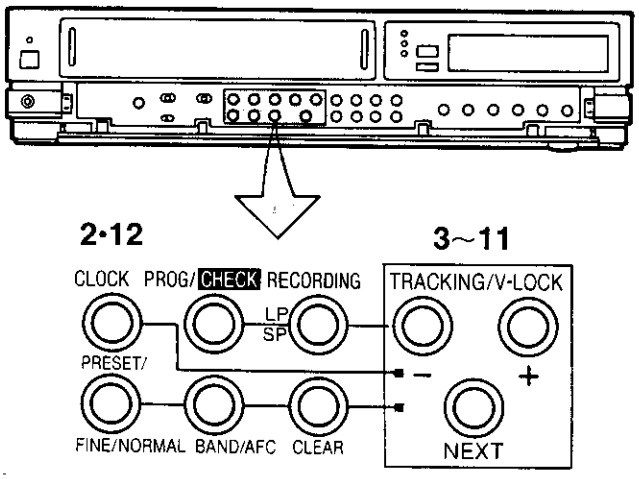
select channel	press button	
1–9	1 — 9	respective channel
10	-/-- → 1 → 0	
20	-/-- → 2 → 0	
11–99 for example 32	-/-- → 3 → 2	

If more than 5 seconds pass between the first, second and third push, the channel will not be changed normally.

To select the "A1" programme position:
Press the Input Signal Selector.
To select the signals which are input via Audio Input Socket and Video Input Socket, select the "A1" programme position.

Setting the Clock to the Present Time

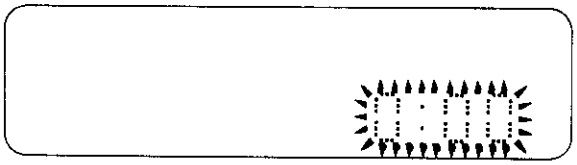
The built-in digital clock employs the 24-hour system.



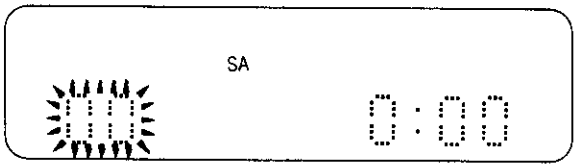
For Example: Set the clock for Sunday, October 10, 1999, 9:10.

- Connect the VTR to the mains outlet.
- Press the VTR On/Off Switch to turn the VTR On.

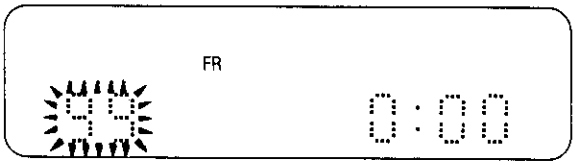
1 When connecting this VTR to the mains or after a long power failure, the indications flash.



2 Press the Clock Button to start the date and time setting.

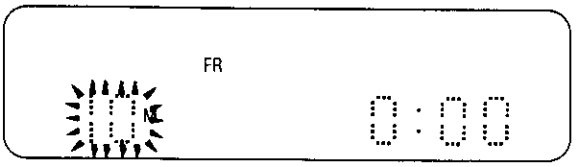


3 Press the "+" or "–" Button to set the year.



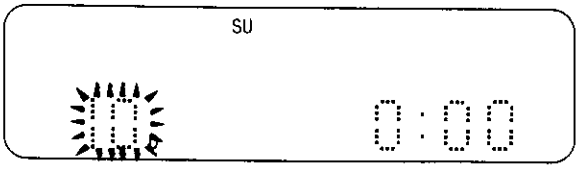
4 Press the Next Button.

5 Press the "+" or "–" Button to set the month.



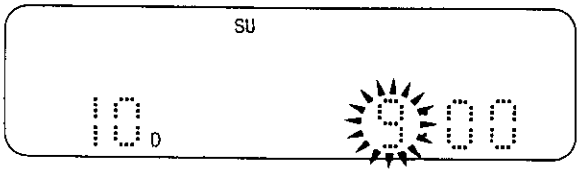
6 Press the Next Button.

7 Press the "+" or "–" Button to set the date.



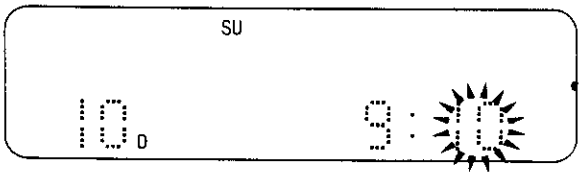
8 Press the Next Button.

9 Press the "+" or "–" Button to set the hour.

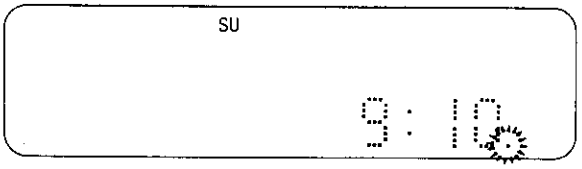


10 Press the Next Button.

11 Press the "+" or "–" Button to set the minute.



12 Press the Clock Button when the present time becomes exactly 9:10'00".



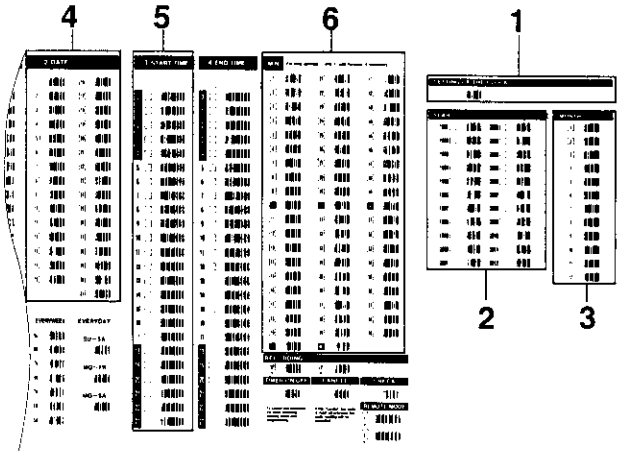
At every push of the Next Button, the flashing indication changes in the following order.

YEAR→MONTH→DATE→HOUR→MINUTE

- In case of a power failure, the timer back-up system maintains the clock operation and timer content for at least 60 minutes. However, depending on the charging time and the memory content, the back-up time may be considerably longer. However, it takes more than 60 minutes for the back-up circuit to become operational, after the VTR is connected to the mains.
- The Timer Record Function should be set to "Off", otherwise the VTR cannot be operated normally. In this case, the Timer Record Indicator "⏲" will flash to warn you.
- During date setting, the corresponding day is simultaneously set.
- The clock/timer of the VTR is programmed with the calendar up to the end of the year 2087.
  The indications 88-99 are for the years 1988–1999.
  The indications 00-87 are for the years 2000–2087.

Setting the Clock to the Present Time (Cont'd)

Setting the Clock to the Present Time Using the Bar Codes

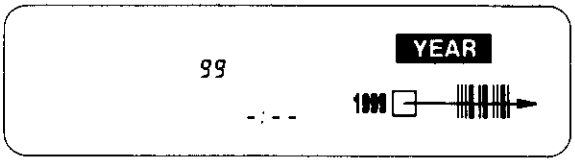


Preparation

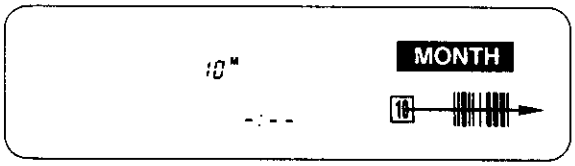
- Press the Digital Scanner On/Off Button to turn it "ON".

1 Trace the bar code "SETTING OF THE CLOCK".

2 Trace the bar code for the year (YEAR).

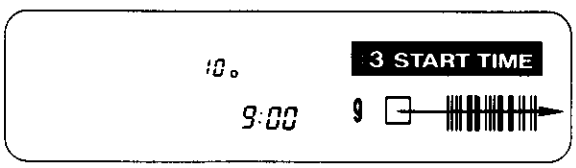


3 Trace the bar code for the month (MONTH).

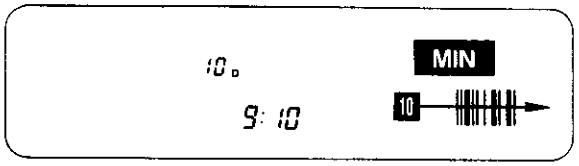


4 Trace the bar code for the day of the month (DATE).

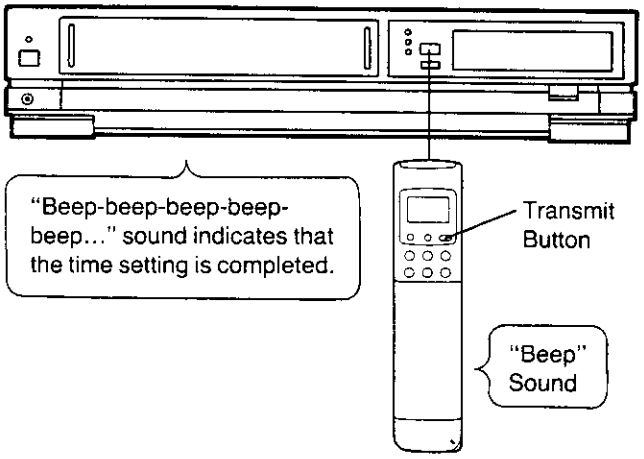
5 Trace the bar code for the hour (START TIME).



6 Trace the bar code for the minute (MIN).



7 Press the Transmit Button (Remote Controller) and then confirm that the time is displayed in the Multi-Function Display of the VTR.

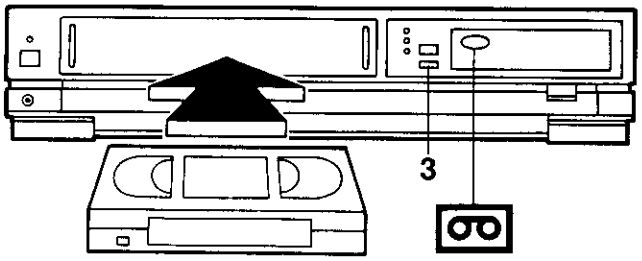


8 Press the Digital Scanner On/Off Button to turn it "OFF".

- If the transmission was not received correctly, the "Beep-Beep, Beep-Beep" sound from the VTR will warn you. In this case, perform transmission again.
- If the Remote Controller is left with no operation performed for more than 4 minutes, it will automatically switch over to the power-saving standby condition and the lamp in the reading tip goes out. In this case, bar codes that have already been read (but not yet transmitted to the VTR) will be cancelled.
- The bar codes "SETTING OF THE CLOCK", "YEAR" and "MONTH" are located on page 3 of the Programming Sheet.

The Video Cassette

Inserting a Video Cassette (Auto Operation)



1 Insert the video cassette as shown. The VTR will be turned on automatically and the cassette will be automatically drawn into the VTR.

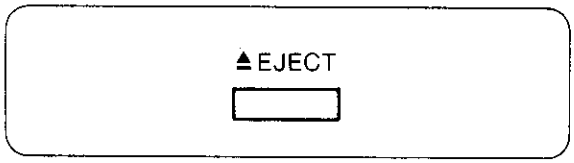
2 When a video cassette is inserted, the "📼" mark will appear.

Notes:

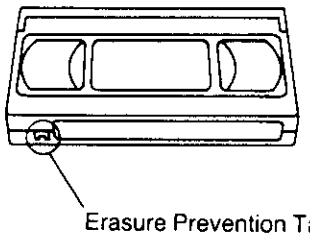
- When a video cassette with broken out erasure prevention tab (for example a pre-recorded tape) is inserted, playback will start immediately.
- Use VHS video cassette tapes only.

Removing a Video Cassette

3 Press the Eject Button (⏏).

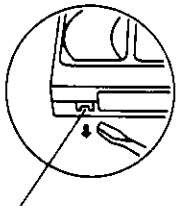


Simply press the Eject Button; the VTR turns itself on, ejects the cassette and turns itself off again.



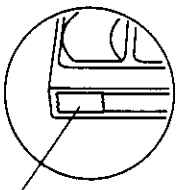
Erasure Prevention Tab

To prevent accidental erasure



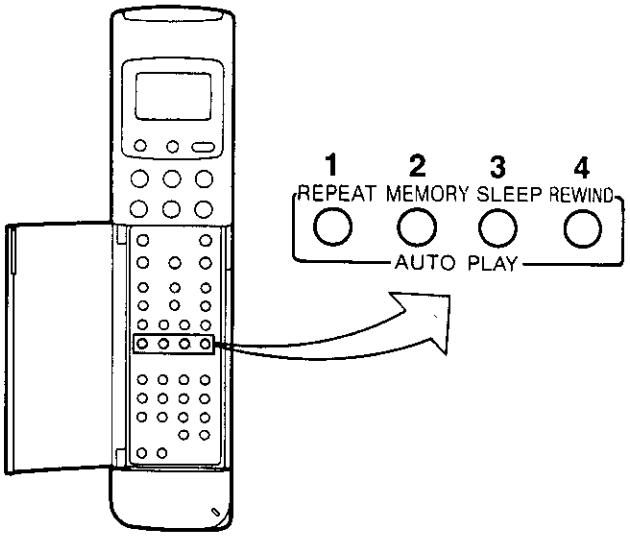
Break off the tab with a screwdriver.

To record again



Cover the hole with adhesive tape.

Auto Operation

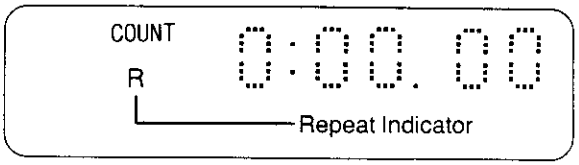


Convenient Automatic Playback Functions

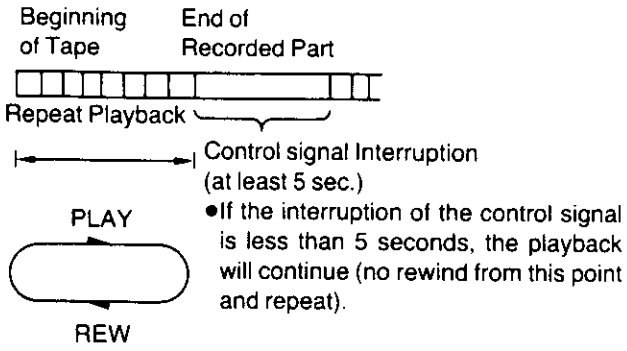
The following convenient automatic playback operations can be activated simply by pressing a single button on the Remote Controller.

1 Repeat Playback

When the Repeat Button is pressed, the "R" Indication will light up in the Multi-Function Display on the VTR and playback will start. When the tape reaches the end of its recorded portion, it will automatically be rewound to the beginning and playback will then start again. This process will be performed repeatedly.



- The playback will continue until the VTR detects the end of the video recording (no control signal for more than 5 seconds). At this point, the tape will be rewound to the beginning and the playback will be repeated.



- If the interruption of the control signal is less than 5 seconds, the playback will continue (no rewind from this point and repeat).

To stop the Repeat Playback, press the Stop Button.

Note:
If a short tape portion is played back many times, the tape may become damaged at that part.

2 Memory Playback

When the Memory Button is pressed while the VTR is in the Stop mode, the tape is then fast-forwarded or rewound and it will be stopped at the tape counter position "0:00.00", and playback will then start from that position.

3 Sleep Playback

When the Sleep Button is pressed, playback will start. As soon as the tape reaches its end, it will be automatically rewound to the beginning, and the VTR will then turn itself off.

4 Rewind Playback

When the Rewind Button is pressed, the tape will be rewound. As soon as the beginning of the tape is reached, playback will start automatically.

Auto Operation

Auto VTR On

When a cassette is inserted, the VTR turns itself on automatically.

Auto Play

When inserting a video cassette which has the erasure prevention tab removed, playback will start automatically.

Auto Rewind

When the tape reaches its end during recording (except OTR and timer recording) or playback, it will automatically be rewound to the beginning.

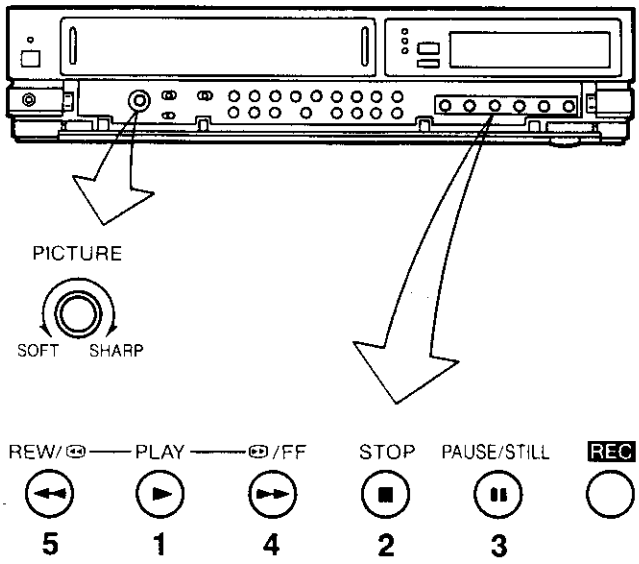
VTR-Off Eject

When the VTR is off, the inserted cassette can be ejected simply by pressing the Eject Button, and VTR will automatically turn itself off again.

Auto Head Cleaning Function

This VTR features a special function that automatically removes tape particles and dust from the video heads to ensure continuously superior picture quality. While the Head Cleaning Function is working, some noise may be reproduced. However, this is no malfunction.

Playback



Preparation

- Make sure that the Timer Record Function is set to "Off".
- Insert a recorded video cassette.
  When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Turn the TV set on and select the video playback channel.
- Set the Noise Filter/Edit Selector to "Off".

1 Normal Playback

Press the Play Button (▶).

- Control the picture as you like with the Picture Sharpness Control (sharp or soft contours).

2 To Finish Playback

Press the Stop Button (■) to stop the playback.

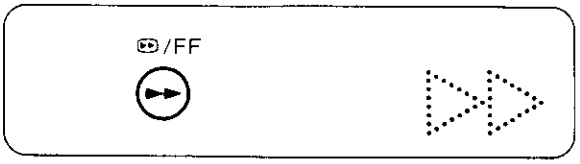
3 Super Still Playback

When the VTR is in the playback mode, press the Pause/Still Button (❚❚) to view a still-picture. To continue the normal playback, press the Play Button (▶) or this button again.

- If you leave the VTR in the still playback mode for more than 5 minutes, the VTR will automatically switch over to the Stop mode to protect the tape and the video heads.

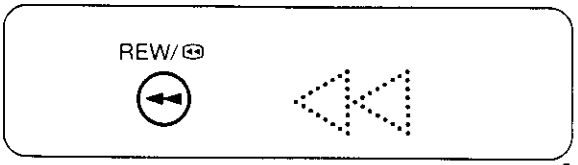
4 Cue Playback

When the Fast Forward ▶▶/Cue ▶▶ Button is kept pressed while the VTR is in the playback mode, the tape will be played back at high speed in forward direction.



5 Review Playback

When the Rewind ◀◀/Review ◀◀ Button is kept pressed while the VTR is in the playback mode, the tape will be played back at high speed in reverse direction.



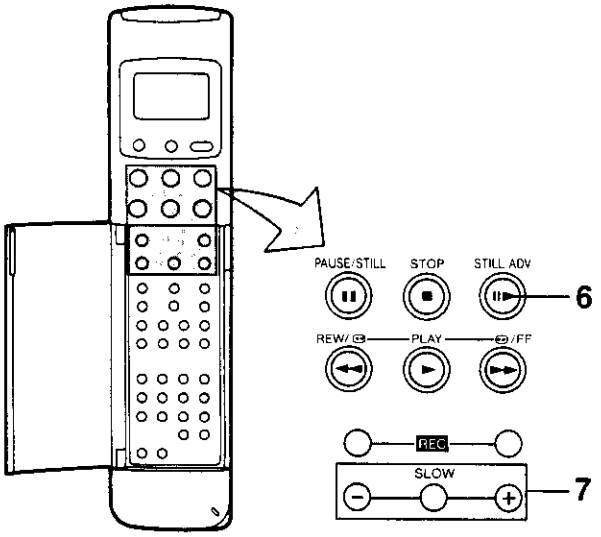
To make possible Cue or Review playback without having to keep the respective button pressed

Press the Fast Forward ▶▶/Cue ▶▶ Button or the Rewind ◀◀/Review ◀◀ Button once only, then release.
To switch the VTR back to normal playback, press the Play Button (▶).

- When Cue or Review playback continues for more than 10 minutes, the VTR will automatically switch back to the normal playback mode.

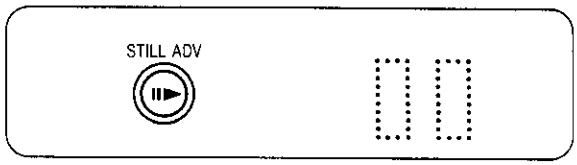
Playback (Cont'd)

Using the Remote Controller



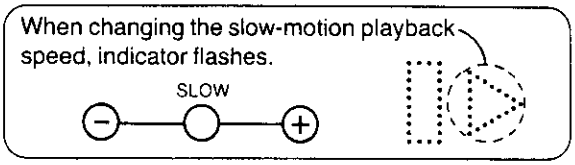
6 Super Still Advance Playback

Press the Still Advance Button (II▶) while the VTR is in the still playback mode. Each time you press this button, the still-picture will advance one single field.



7 Super Fine Slow Playback

During normal playback, the Slow-motion playback can be activated by pressing the Slow Button. The slow-motion playback speed can then be varied by using the Slow "+" or "−" Button.



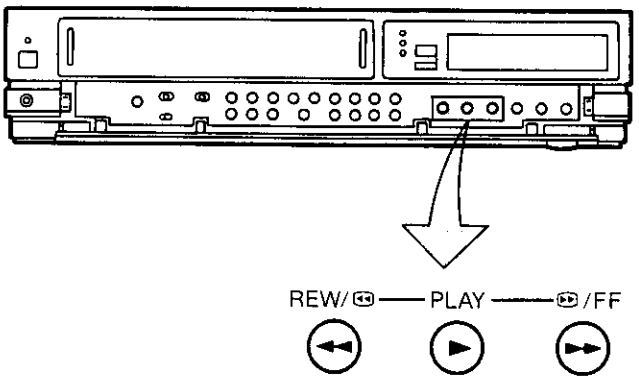
- Press the Play Button (▶) to continue the normal playback.
- If the Slow playback operation continues for more than 5 minutes, the VTR automatically switches over to the stop mode.
- While playing back a tape in the Super Still or Super Fine Slow playback mode on a TV set equipped with an automatic vertical hold control, the picture may shake vertically. In this case, set the TV set's vertical hold (Auto/Manual) selector to the "Manual" position, and adjust with the vertical hold control.

Slow Tracking Control

- When noise bars appear during Super Still, Super Still Advance or Super Fine Slow playback, switch over to slow playback and adjust with the Tracking "+" or "−" Button to reduce the noise bars.
- It may not be possible to eliminate the noise bars completely.

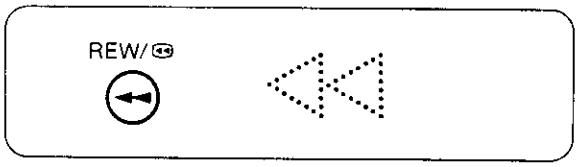
- The sound will be played back only during normal playback.
- When the picture rolls vertically in the Cue or Review mode, adjust the vertical hold control on the TV set.
- Immediately after starting Cue or Review playback, the picture may be distorted. Also, when these modes are cancelled, some momentary picture distortion may occur. However, this is not due to any malfunction.
- Noise which takes the form of horizontal bars appears on the TV in the Cue and Review playback modes. This is not an indication of a malfunction.
- The top of the picture may become distorted in the Cue or Review mode. This is not an indication of a malfunction.
- In "LP" mode only:
  1. During any playback mode other than normal playback, the picture may have some noise bars, the colour may be unstable, or a black and white picture may appear.
  2. When playing back a tape which was recorded on another VTR, it may be necessary to adjust the Tracking Control. In some cases the picture quality may still be inferior. This is due to limitation of format.

Playback (Cont'd)

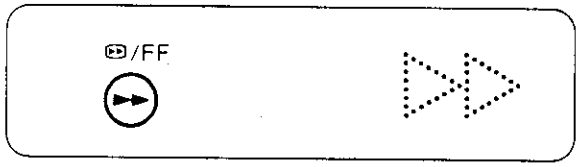


Rewind and Fast Forward

Press the Rewind ◀◀/Review ⏪ Button to rewind the tape.

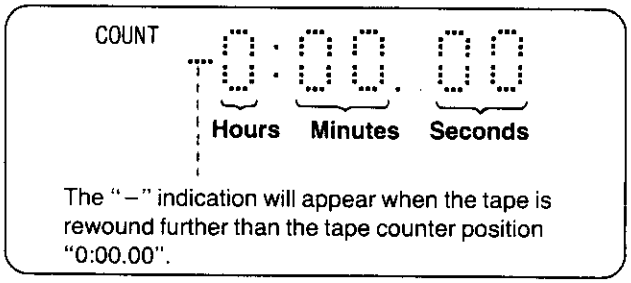


Press the Fast Forward ▶▶/Cue ⏩ Button to wind the tape forward rapidly.



Lap Time Counter

It shows the elapsed recording or playback time.



The "–" indication will appear when the tape is rewound further than the tape counter position "0:00.00".

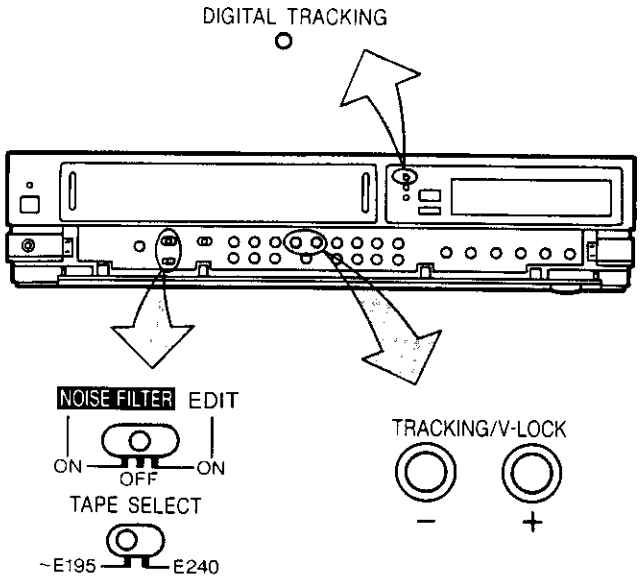
- If the figures on the Tape Counter do not change during Fast Forward, Rewind or any of the Playback functions, this means that nothing is recorded on that tape section.
- The Tape Counter is automatically reset to "0:00.00" when the video cassette is inserted.
- During playback of NTSC recordings, the Tape Counter does not function correctly.

NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

- Set the NTSC 4.43 Switch to the "OFF" position. When a tape is played back after setting the Switch to "ON", the colours will be reproduced correctly only if an 4.43 MHz NTSC system TV is used.
- Depending on the TV set used, the picture may shrink vertically and black bars may appear both at the top and bottom of the screen.This is not an indication of a malfunction.
- The playback picture may roll up or down. If the TV set is equipped with a V-HOLD control, it may be possible to stop the picture movement by adjusting this control. However, TV sets not equipped with a V-HOLD control cannot correct this condition.
- When playing back a tape recorded in the NTSC system SLP mode, the "LP" Indication will light up in the Multi-Function Display.
- The special playback functions (except normal playback) cannot be used for NTSC playback. This is not an indication of a malfunction.
- Recording in the NTSC 3.58 system is not possible with this VTR. Insert editing and audio dubbing also would not function correctly, so please do not operate these functions.
- Depending on the TV set used, the picture may be in black and white. However, this is not an indication of a malfunction.

Playback (Cont'd)



Digital Tracking

When playback is started after inserting a cassette, and the VTR is turned on, the Digital Tracking function will be activated automatically, the Digital Tracking Indicator will flash for several seconds, and the tracking will be adjusted automatically (after the adjustment, the Digital Tracking Indicator will remain lit).

- When the Digital Tracking Indicator is lit and the tape speed (SP/LP) is changed, the Digital Tracking function will be activated. However, when operating any function other than playback, insert editing and audio dubbing, this function will not work.
- During playback, the Digital Tracking function will be activated whenever the playback changes over from an unrecorded part to a recorded part, provided the recorded part is longer than 4 seconds.

- When the picture is distorted by noise bars, press the Tracking "+" or "−" Button to select manual tracking and adjust with these two buttons. The Digital Tracking Indicator goes out.
  To change back to Digital Tracking, press the Tracking "+" and "−" Buttons simultaneously.

Vertical Lock Adjustment

If vertical jitter occurs, adjust with the V-Lock "+" or "−" Button during Still playback.

- When the AC Mains Lead is unplugged or a power failure occurs, perform the vertical lock adjustment again.

Noise Filter/Edit Selector

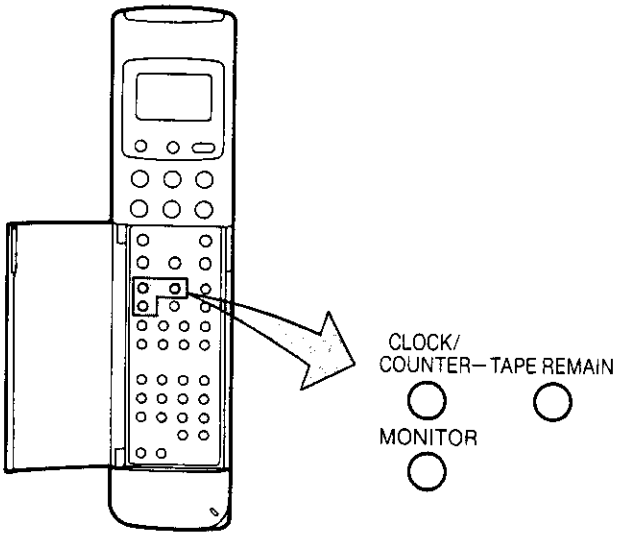
EDIT ON: For editing operations such as dubbing.
OFF: For ordinary use of the VTR.
NOISE FILTER ON: For playback of tapes with inferior picture quality caused, for example, by repeated dubbing.

- When the Noise Filter/Edit Selector is set to "EDIT ON", the picture sharpness cannot be adjusted with the Picture Sharpness Control.

Tape Select Switch

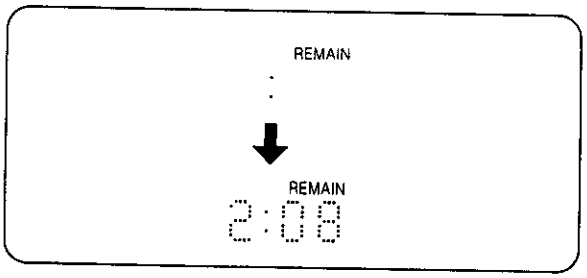
To obtain a correct Remaining Tape Time indication when using an NV-E240 video cassette tape, this switch must be set to the "E240" position.
When using NV-E30, 60, 90, 120, 180 or 195 video cassette tapes, set this switch to the "~E195" position.
If cassettes with other tape lengths than the above are used, the Remaining Tape Time indication will not be precise.

Playback (Cont'd)



Indication of the Remaining Tape Time

When the Tape Remain Button on the Remote Controller is pressed during playback or recording mode, the approximate remaining tape time will be displayed in hours and minutes.



- The Remaining Tape Time Indication will remain displayed even after the tape is ejected. However, when next inserting a cassette, this indication will be cancelled.
- When using a VHS-C videocassette in this VTR, the remaining tape time indication may not be correct or this indication may not appear at all.
- To return to the Tape Counter indication, press the Tape Remain Button again.

Clock/Counter Selector

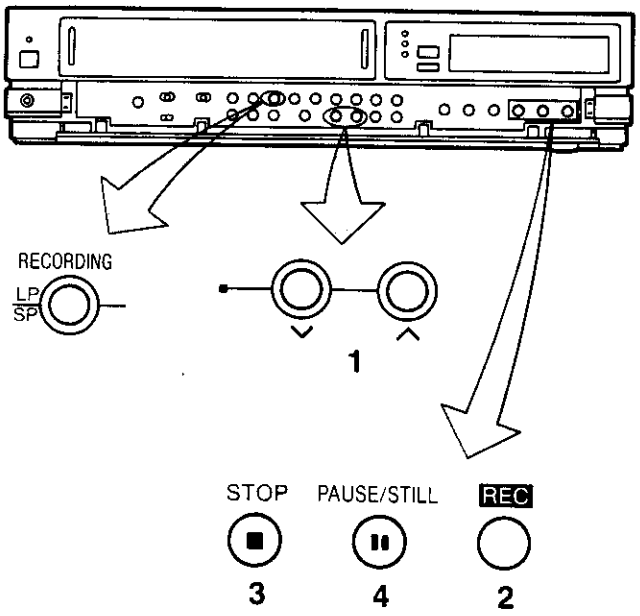
By pressing this button when the VTR On/Off Switch is set to "On", it is possible to change over the display mode of the Clock/Counter Display in the Multi-Function Display from "Clock" to "Counter" Display and vice versa.

- Even if the selector button is set for "Counter", the display will automatically changes over to "Clock" Display in all the following cases; When you set the VTR On/Off Switch to "Off", adjust the clock to present time, programme a timer recording, check a timer recording programme or programme and perform an OTR.
- When the Clock/Counter Display shows the time, the counter cannot be reset.

Monitoring Function

When the Monitor Button is kept pressed during Playback or Still playback, the broadcast picture of the selected programme position (channel) or input signal through Audio/Video input socket will be displayed. When this button is released, the picture will change back to the playback picture of the tape.

Recording from a TV Broadcast Signal



Preparation

- Make sure that the Timer Record Function is set to "Off".
- Insert a video cassette with the erasure prevention tab intact.
  When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Set the Tape Speed Selector to "SP" or "LP".
- Set the VTR/TV Selector to "VTR".

Tape Speed Selector (SP/LP)

For recording, either of two tape speeds can be selected. During playback, the VTR will automatically select the correct speed.

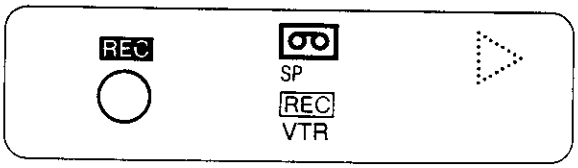
- SP Mode: For better picture quality.
- LP Mode: For longer recording time.

It is not recommended to change from the SP to the LP mode or vice versa in the middle of recording. Even if the switching is done while the VTR is in the pause mode, picture distortion will occur at the switching point during playback.

Note:
The picture quality in the LP mode is not as good as that in the SP mode.

1 Select on the VTR, the programme position (channel) to be recorded. In order to confirm proper reception, turn on the TV set and select the video playback channel.

2 Press the Record Button.



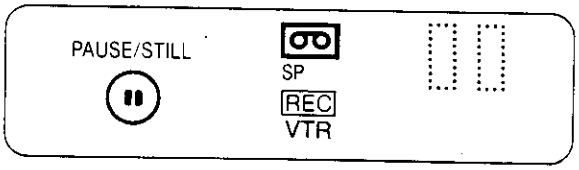
- When a video cassette with broken out tab is inserted, the "📼" indication will flash, and an alarm sound will be produced to indicate that recording is not possible.
- During recording, the programme position (channel) on the VTR cannot be changed.
- To start a recording with the Remote Controller, press the two Record Buttons on the Remote Controller simultaneously.
- When a recording (including OTR and Timer Recording) is started, the tape is played back for a short moment before the actual recording starts, in order to achieve smooth continuation from the previous to the new recording. Therefore, the new recording starts about 1.5 seconds late.

To Finish the Recording

3 Press the Stop Button (■).

If You Wish to Avoid Recording Unwanted Material

4 Press the Pause/Still Button (❚❚) to stop the tape temporarily.



- Press the Pause/Still Button (❚❚) again to continue the recording.
- If you leave the VTR in the pause mode for more than 5 minutes, the VTR will automatically switch over to the stop mode to protect the tape and the video heads.

Recording One TV Programme While Watching Another

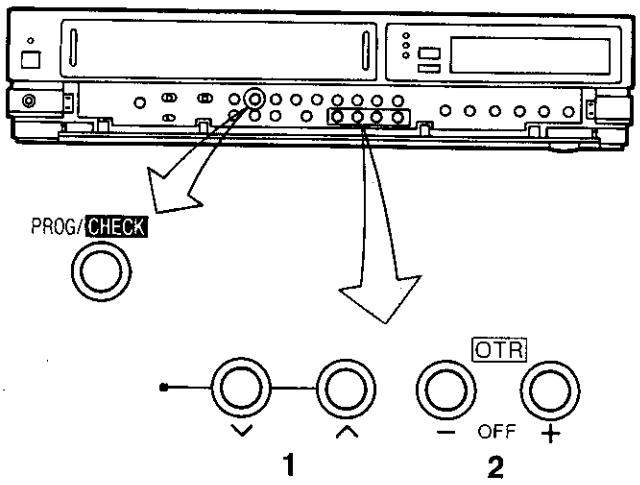
1 Record (following steps 1 and 2).

2 Set the VTR/TV Selector to "TV".

3 Select the desired programme position (channel) on your TV set.

Super OTR Function (One-Touch Timer Recording)

This convenient function makes it possible to easily programme the VTR for recording of TV programmes with immediate start by precisely setting ending time to the desired minute, and the VTR will automatically turn itself off when the recording ends.



Preparation

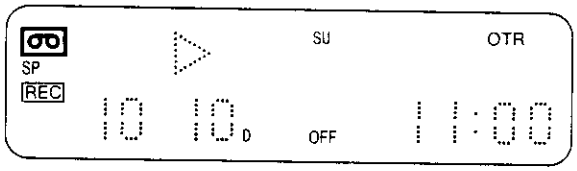
- Insert a video cassette with the erasure prevention tab intact.
  When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Make sure that the clock shows the present time correctly.
- Set the Tape Speed Selector to "SP" or "LP".

OTR Function with Immediate Start

For example; OTR recording of a TV programme broadcast to 11:00.

1 Select the programme position (channel) to be recorded.

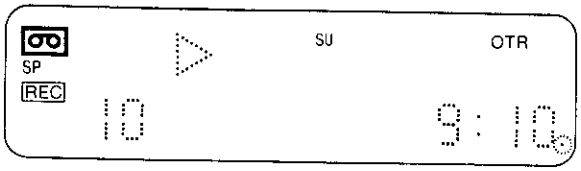
2 Press the OTR Off "+"or "−" Button to set the OTR ending time to 11:00.



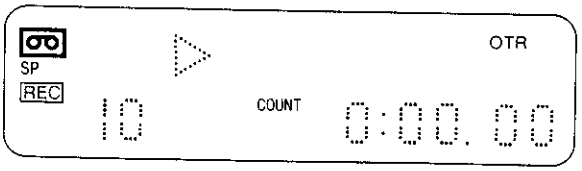
- The "OTR" indicator will be displayed.

- When a video cassette with broken out tab is inserted, the "📼" indication will flash, and an alarm sound will be produced to indicate that recording is not possible.
- When quickly and repeatedly pressing the OTR Off "+" or "−" Button, the corresponding time indication changes in 1-minute steps. When it is kept pressed, the indication changes in 10-minute steps.
- The VTR will automatically switch off, when the OTR is completed. To turn the VTR on again, press the VTR On/Off Switch.

When the Programme/Check Button is pressed once, the present time will be displayed.



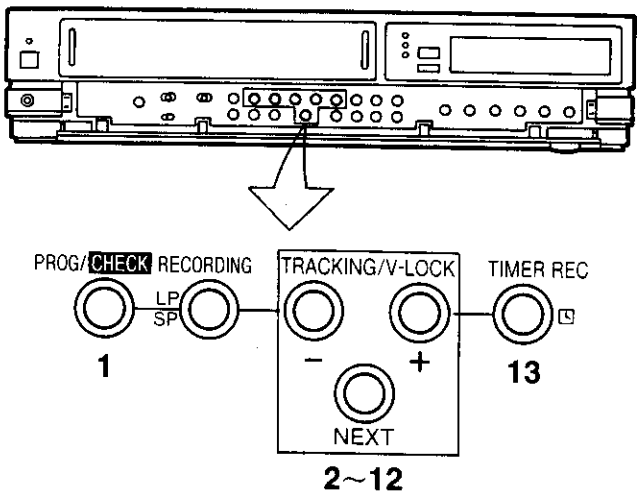
When the Clock/Counter Selector Button (Remote Controller) is pressed during OTR recording, the display will change over to the counter mode.



- When the tape reaches its end during an OTR the VTR will turn itself off.
- Make sure that the OTR Function (One-Touch Timer Recording) does not overlap a programmed timer recording. An OTR always takes precedence over a timer recording.
- It is possible to change the OTR ending time even during the recording.
- To interrupt an OTR, press the VTR On/Off Switch to turn the VTR off.

Timer Recording

The programming of timer recordings is possible both on the VTR itself and via the Remote Control Unit.
Programming of as many as 8 timer recording is possible up to one month in advance.

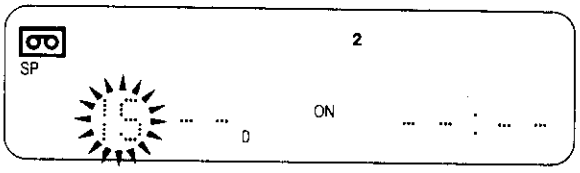


Preparation

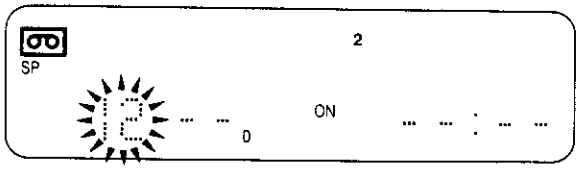
- Make sure that the clock shows the present time correctly.
- Make sure that the Timer Record Function is set to "Off".
- Insert a video cassette with the erasure prevention tab intact.
  When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.

For Example:
Programming a timer recording for a TV programme that will be broadcast on Wednesday, October 27, from 10:30 to 11:45, on programme position (channel) 12, on timer programme number 2. (Present date=October 10, 1999)

1 Press the Programme/Check Button to select the next unoccupied timer programme number.
- Press the Tape Speed Selector Button until the Indicator of the desired tape speed ("SP" or "LP") is lit in the Multi-Function Display.

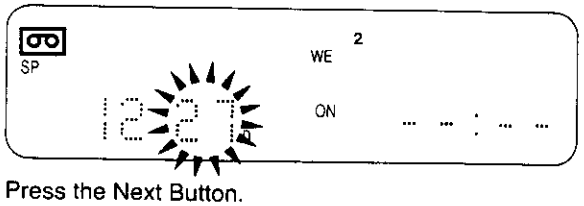


2 Press the "+" or "–" Button to select the programme position (channel) on which the TV programme will be broadcast.



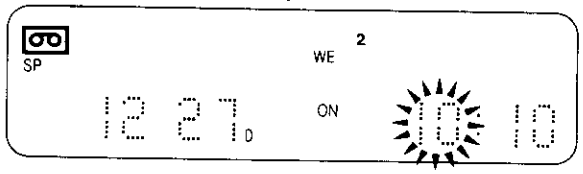
3 Press the Next Button.

4 Press the "+" or "–" Button to set the date.



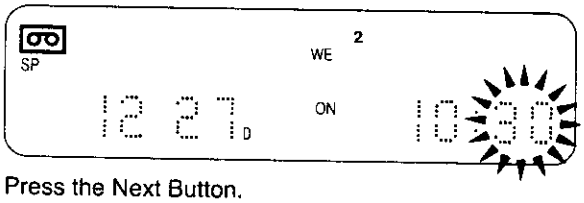
5 Press the Next Button.

6 Press the "+" or "–" Button to select the hour of the starting time of the TV programme.



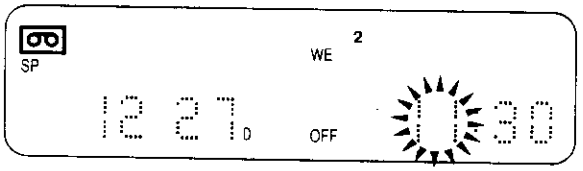
7 Press the Next Button.

8 Press the "+" or "–" Button to select the minute of the starting time of the TV programme.



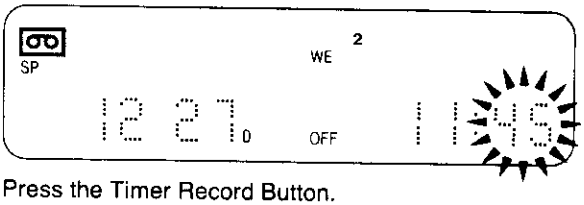
9 Press the Next Button.

10 Press the "+" or "–" Button to select the hour of the end time of the TV programme.

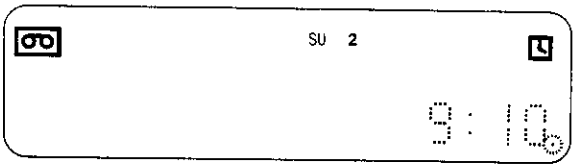


11 Press the Next Button.

12 Press the "+" or "–" Button to select the minute of the end time of the TV programme.



13 Press the Timer Record Button.



- The tape speed (SP/LP) can be selected in any of the steps 1 to 12.

Timer Recording (Cont'd)

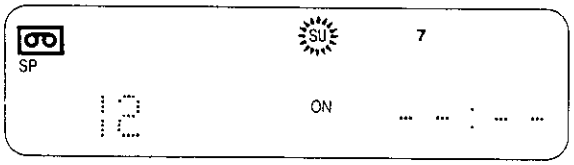
For Everyweek Recording

For Example:
Programming a timer recording for a TV programme that is broadcast every week on Sunday, from 10:30 to 11:45 on timer programme number 7.

Programming for everyweek recording can be made on any of the timer programme numbers 1–8.

Perform the operation steps 1 to 3 on page 23.

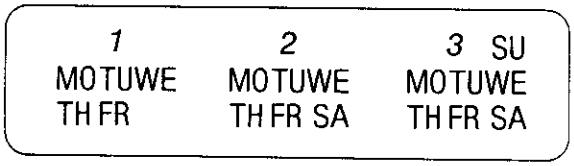
4 Press the "−" Button repeatedly until the "SU" Indicator (=Sunday) is lit.



Perform the operation steps 5 to 13.

For Everyday Recording

For Everyday Recording, you have the choice between 3 different modes: Monday through Friday *(1)*, Monday through Saturday *(2)*, and Sunday through Saturday *(3)*.

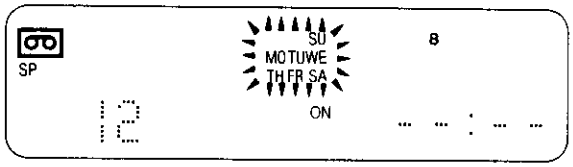


For example:
Programme time for timer recording every day from 10:30 to 11:45 on timer programme number 8.

Programming for everyday recording can be made on any of the timer programme numbers 1–8.

Perform the operation steps 1 to 3 on page 23.

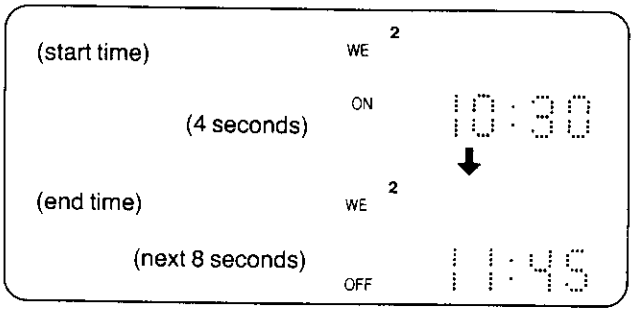
4 Press the "−" Button until the desired type of Everyday Recording (*1*, *2*, *3*) is displayed.



Perform the operation steps 5 to 13.

To Confirm the Programme of a Timer Recording

Make sure that the VTR is turned on.
Make sure that the Timer Record Function is set to "On".
Select the programme number to be checked, by repeatedly pressing the Programme/Check Button.
The preset channel and start and ending times of the timer recording will be indicated for about 12 seconds.



To Cancel a Timer Recording

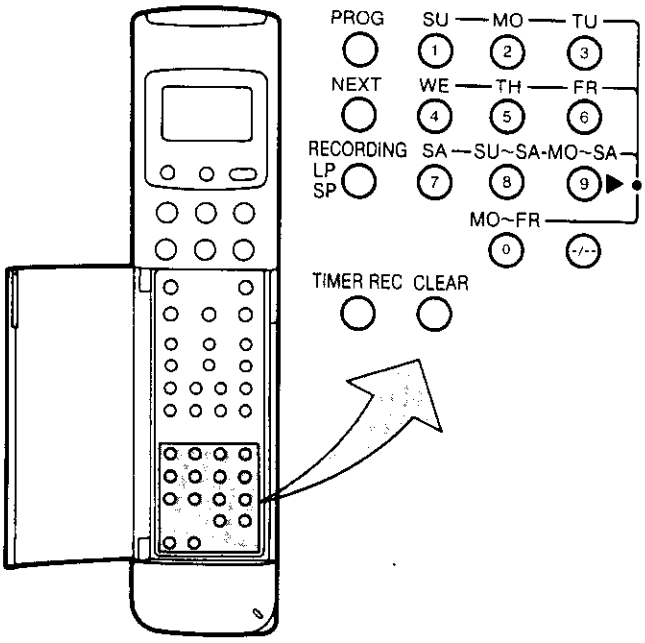
Make sure that:
the VTR is turned on,
the Timer Record Function is set to "Off".

1 Press the Programme/Check Button repeatedly, until the number of the timer programme that you want to cancel is displayed.

2 Press the "+" and "−" Button simultaneously for more than 3 seconds.

- During recording, the programme position (channel) on the VTR cannot be changed.
- When you want to watch TV after setting a timer recording, select the desired channel on the TV set.
- To cancel a timer recording during recording, set the Timer Record Function to "Off".
- It is impossible to confirm programmes of timer recordings while an OTR is being performed.
- To turn the VTR on and use it for playback or recording before the timer recording is performed, set the Timer Record Function to "Off".
- When the Timer Record Function is set to "On" with no video cassette or a video cassette with broken tab inserted, the "⏺" and "⏲" indications will flash. The "⏲" indication will also flash, when programming is not completely finished. While it is flashing, an alarm sound will be produced to indicate that recording is not possible.
- If a timer recording is not performed to the end (not enough tape or cancelled by the user), the programmed timer recording data will be cancelled from the memory at 4 a.m. two days later. However, if the Timer Record Function is activated or an OTR recording is being performed at that time, the programmed timer recording data will be cancelled 24 hours later.

TIMER RECORDING BY USING THE REMOTE CONTROLLER



How to select the programme position (channel)
To select a figure between 1 and 9, press the numeric button corresponding to the number.
To select a 2-digit figure, first press the "-/--" button and then press the two corresponding numeric buttons one after the other within 5 seconds.

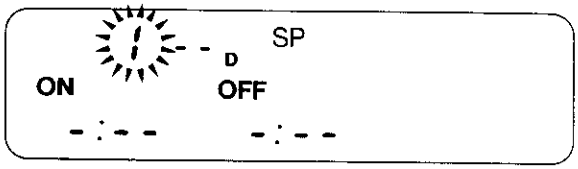
How to set the Date and the Starting & Ending Times for Timer Recording
To select a figure between 0 and 9, first press the numeric button "0" and then press the numeric button corresponding to the number.
To select a 2-digit figure, press the two corresponding numeric buttons one after the other.

2 → (0) → (2)
15 → (1) → (5)
30 → (3) → (0)

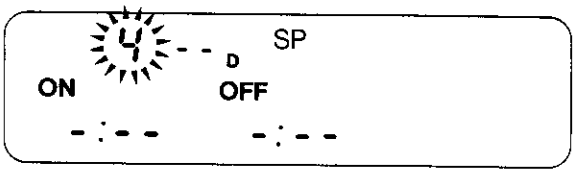
- The second button must be pressed within 5 seconds after the first button.
- Before pressing the Next Button, confirm that the figure that you have input is indicated in the proper decimal position in the Display.
- After inputting the minute, confirm that the minutes are indicated as a 2-digit figure, before pressing the Next Button.
- If the Next Button is pressed while a figure is only indicated in the tens digit, it will be treated as a programming error and will not be accepted.
- However, when no further figure is input within 5 seconds after inputting a single digit, this figure will move to the units digit.
- When pressing the following buttons first, they will immediately be input in the units digit.
  For the date: "4"~"8" Buttons
  For the hour: "3"~"9" Buttons
  For the minute: "6"~"9" Buttons

Example: When programming a timer recording for a programme that will be broadcast on channel position 4 on the 3rd of the month, from 7:02 to 7:30.

1 Press the Programme Button.
- Press the Tape Speed Selector Button until the Indicator of the desired tape speed ("SP" or "LP") is lit in the Display.

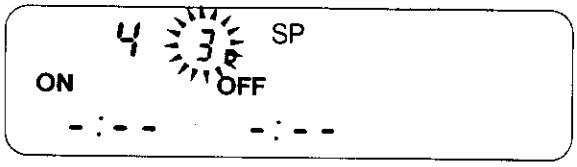


2 Press the Number Buttons to select the programme position (channel) on which the TV programme will be broadcast.



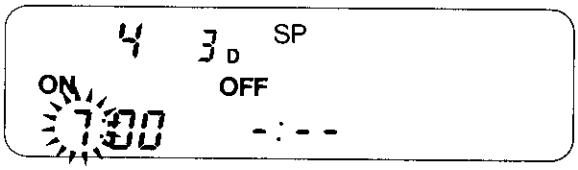
3 Press the Next Button.

4 Press the Number Buttons to set the date.



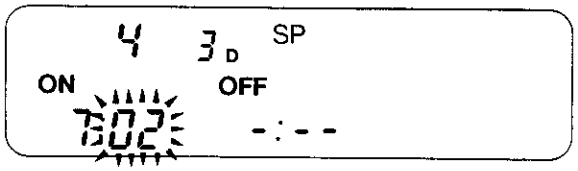
5 Press the Next Button.

6 Press the Number Buttons to select the hour of the starting time of the TV programme.



7 Press the Next Button.

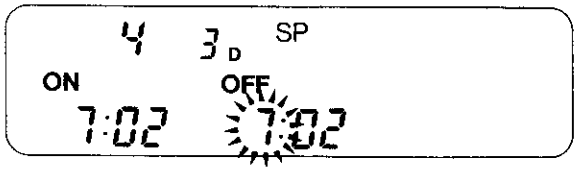
8 Press the Number Buttons to select the minute of the starting time of the TV programme.



Timer Recording (Cont'd)

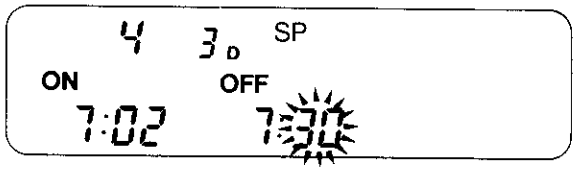
9 Press the Next Button.

10 Press the Number Buttons to select the hour of the end time of the TV programme.



11 Press the Next Button.

12 Press the Number Buttons to select the minute of the end time of the TV programme.

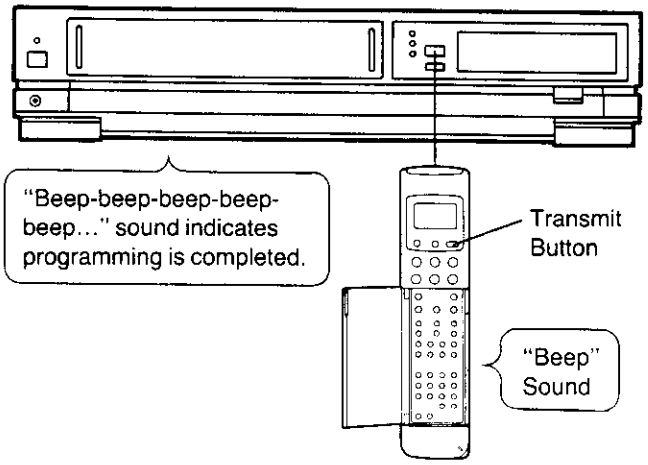


13 Press the Transmit Button.

- The tape speed (SP/LP) can be selected in any of the steps 1 to 12.
- When transmitting the programmed data to the VTR without selecting the desired tape speed (SP or LP is not lit in the Display), the tape speed indicated in the Multi Function Display on the VTR will be programmed for the timer recording.
- To immediately programme one more timer recording, press the Programme Button two times after transmitting the programming data of the first timer recording to the VTR. Then programme the second timer recording.
- If no operation is performed on the Remote Controller for more than 25 seconds, it will automatically switch over to the power-saving standby condition and the indications on the Display will disappear. In this case, the data which have not yet been transmitted to the VTR will be cancelled.

Transmit the Programming Data

Keep pressing the Transmit Button and confirm that the programmed data on the Multi-Function Display of the VTR are as desired.
After releasing the button, the data will continue to be displayed for about 12 seconds.



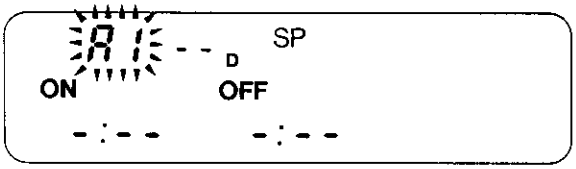
- If the transmission was not received correctly, the "Beep-Beep, Beep-Beep" sound from the VTR will warn you. In this case, perform transmission again.
- The transmission is possible when the VTR is turned on but is not in any of the recording or playback operation modes. It is also possible when the VTR is in the timer recording standby mode (◳ indication is lit).
- The programming will be done on the next lower unoccupied timer programme number (8–1).
- If all programme numbers are occupied, the "Beep-Beep, Beep-Beep" sound from the VTR will warn you that the programming cannot be made.
- When the Transmit Button is pressed, the VTR will automatically be put into the timer recording standby condition and the VTR will be turned off.
- To operate the VTR before the timer recording will be performed, press the Timer Record Button to suspend the timer recording standby condition. After using the VTR, be sure to press the Timer Record Button again, otherwise the timer recording will not be made.

For Recording via External Input

For Example:
Programming a timer recording via Video Input Socket and Audio Input Socket on the 3rd of the month, from 7:02 to 7:30.

Perform the operation step 1 on page 25.

2 Press the Input Signal Selector. The "A1" Indication is lit.



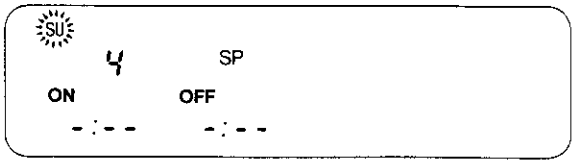
Perform the operation steps 3 to 13.

For Everyweek Recording

For Example:
Programming a timer recording for a TV programme that is broadcast every week on Sunday, from 7:02 to 7:30.

Perform the operation steps 1 to 3 on page 25.

4 Press the "9" Button and then the "1" Button within 5 seconds. The "SU" Indication (=Sunday) is lit.

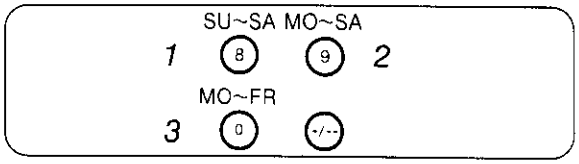


Perform the operation steps 5 to 13.

Timer Recording (Cont'd)

For Everyday Recording

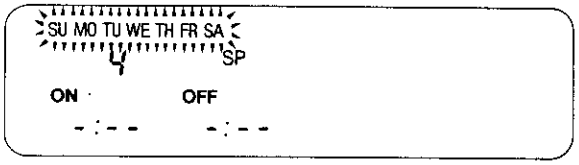
For Everyday Recording, you have the choice between 3 different modes: Sunday through Saturday *(1)*, Monday through Saturday *(2)*, and Monday through Friday *(3)*.



For Example:
Programming a timer recording for a TV programme that is broadcast everyday from 7:02 to 7:30.

Perform the operation steps 1 to 3 on page 25.

4 Press the "9" Button and then the "8", "9" or "0" Button within 5 seconds, according to the desired type of Everyday Recording (*1, 2, 3*).



Perform the operation steps 5 to 13.

How to set Everyweek and Everyday Recording
First press the "9" Button and then press the desired Number Button according to the desired type of Everyweek or Everyday Recording.

Everyweek Recording

Sunday	MO~SA (9) ▶	SU (1)
Monday	MO~SA (9) ▶	MO (2)
Tuesday	MO~SA (9) ▶	TU (3)
Wednesday	MO~SA (9) ▶	WE (4)
Thursday	MO~SA (9) ▶	TH (5)
Friday	MO~SA (9) ▶	FR (6)
Saturday	MO~SA (9) ▶	SA (7)

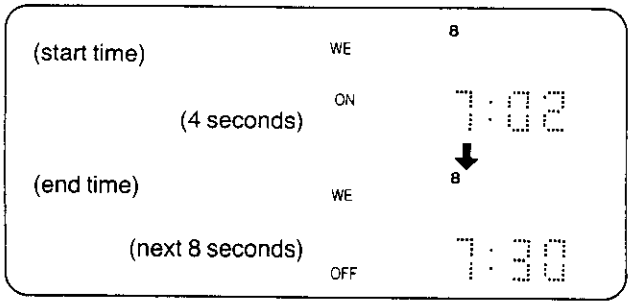
Everyday Recording

Sunday through Saturday	MO~SA (9) ▶	SU~SA (8)
Monday through Saturday	MO~SA (9) ▶	MO~SA (9)
Monday through Friday	MO~SA (9) ▶	MO~FR (0)

The second button must be pressed within 5 seconds after the first button.

To Confirm the Programme of a Timer Recording

Make sure that the VTR is turned on.
Make sure that the Timer Record Function is set to "On".
Make sure that no figures are indicated in the Display of the Remote Controller.
Select the programme number to be checked, by repeatedly pressing the Transmit Button.
The preset channel and starting and ending times of the timer recording will be indicated for about 12 seconds.



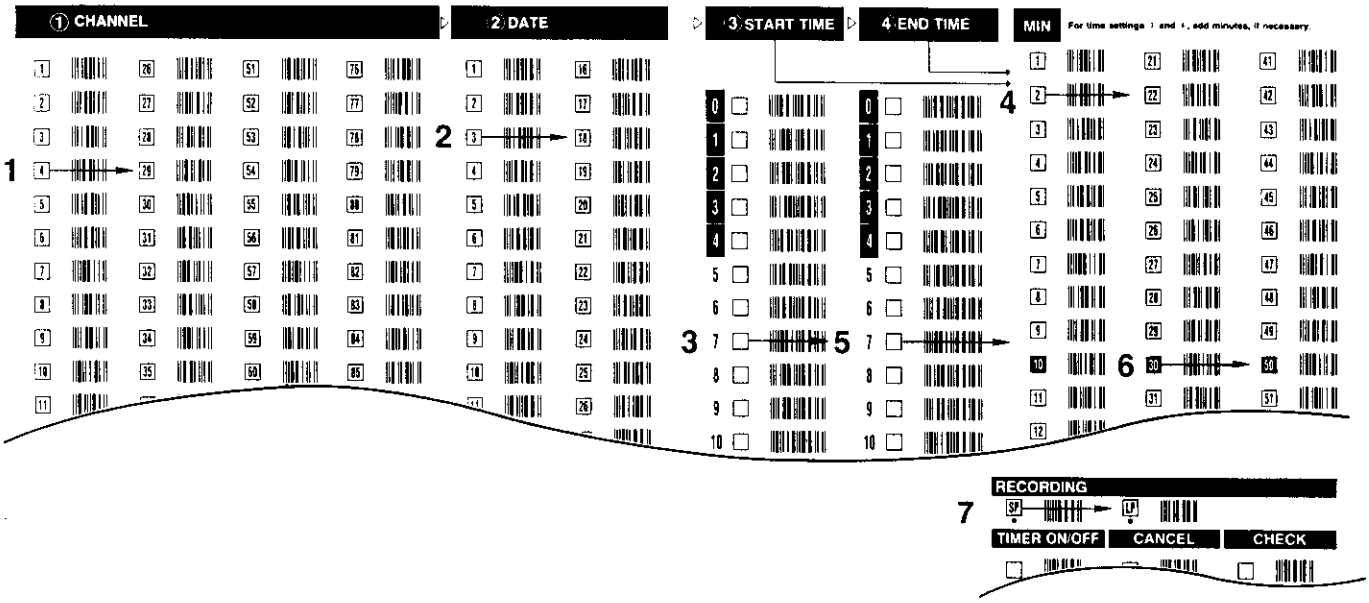
To Cancel a Timer Recording

Make sure that:
the VTR is turned on,
the Timer Record Function is set to "Off".

1 Press the Transmit Button repeatedly, until the number of the timer programme that you want to cancel is displayed.

2 Press the Clear Button.

Timer Recording (Cont'd)



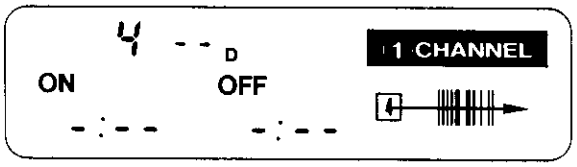
TIMER RECORDING BY USING THE REMOTE CONTROLLER AS DIGITAL SCANNER

Tracing the Bar Codes

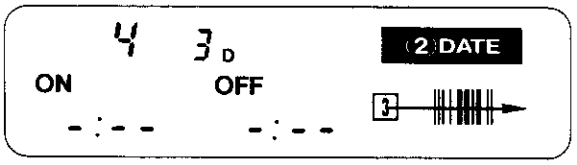
Example: When programming a timer recording for a programme that will be broadcast on channel position 4 on the 3rd of the month, from 7:02 to 7:30, trace the bar codes in the order of the numbered arrows shown.

- Press the Digital Scanner On/Off Button to turn it "ON".

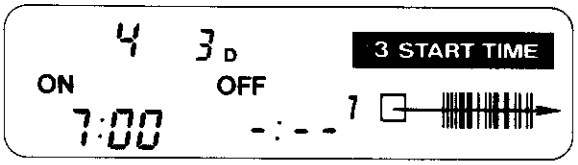
1 Trace the bar code for "CHANNEL".



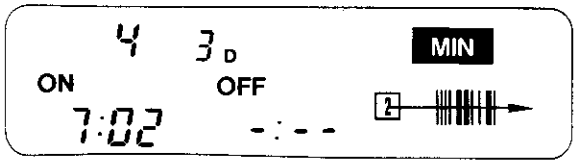
2 Trace the bar code for "DATE".



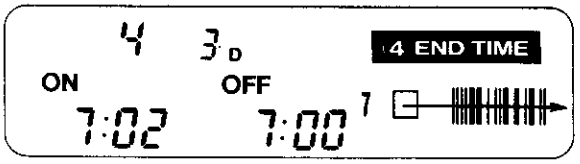
3 Trace the bar code for "START TIME".



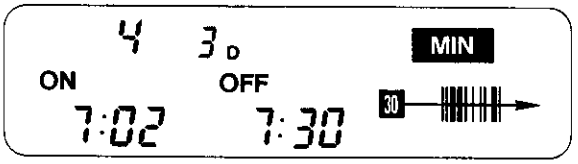
4 Trace the bar code for "MIN".



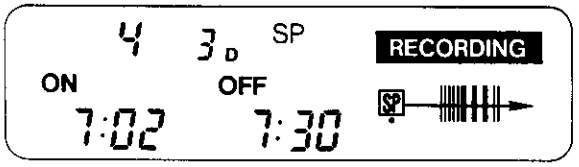
5 Trace the bar code for "END TIME".



6 Trace the bar code for "MIN".



7 Trace the bar code for "RECORDING" according to the desired tape speed.

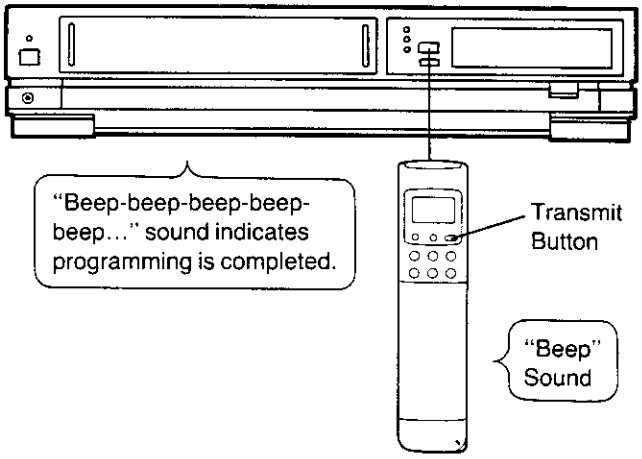


- The "Bee Bee Bee Bee Beeeeep" sound signals that the scanner is now ready for data transmission.
- When no sound is heard, read the bar codes once again.
- If more than one bar code is read in the same group, only the last code will be effective.
- If the "CANCEL" bar code is read, all bar codes that have been read so far will be cancelled.
- If you do not trace the bar code for "RECORDING", the tape speed shown in the Multi-Function Display will be programmed.

Timer Recording (Cont'd)

Transmit the Programming Data

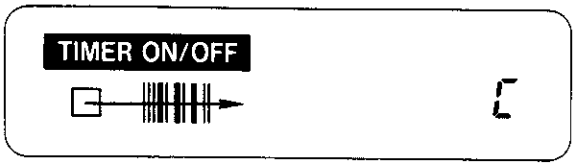
Keep pressing the Transmit Button and confirm that the programmed data on the Multi-Function Display of the VTR are as desired.
After releasing the button, the data will continue to be displayed for about 12 seconds.



- If the transmission was not received correctly, the "Beep-Beep, Beep-Beep" sound from the VTR will warn you. In this case, perform transmission again.
- The transmission is possible when the VTR is turned on but is not in any of the recording or playback operation modes. It is also possible when the VTR is in the timer recording standby mode (⏲ indication is lit).
- The programming will be done on the next lower unoccupied timer programme number (8–1).
- If all programme numbers are occupied, the "Beep-Beep, Beep-Beep" sound from the VTR will warn you that the programming cannot be made.
- When the Transmit Button is pressed, the VTR will automatically be put into the timer recording standby condition and the VTR will be turned off.

Timer On/Off

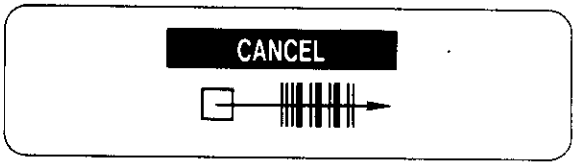
After programming a timer recording, the VTR is in the timer recording standby mode and cannot be used for any other operation, such as playback. If some other operation is desired, first trace the "TIMER ON/OFF" bar code and transmit it to the VTR with the Transmit Button.
To later reset the VTR to the timer recording standby mode, trace the "TIMER ON/OFF" bar code again and transmit it with the Transmit Button.



For Programming More Than One Timer Recording in Succession

Repeat the following operation steps 1–3.

1 Trace the "CANCEL" bar code on the Programming Sheet.

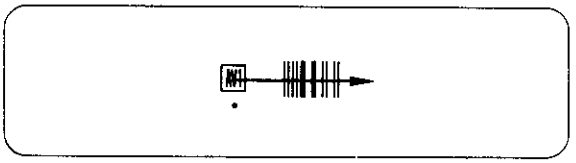


2 Trace the bar codes for "CHANNEL", "DATE", "START TIME", "END TIME" and "RECORDING".

3 Confirm that the present time is displayed on the Multi-Function Display of the VTR, and transmit the data.
- If the next timer programming data are transmitted while the previous timer programming data are still being displayed, the displayed timer recording data will be cancelled.

AV

For Timer Recording of signals input via Video Input Socket and Audio Input Socket, trace the "AV 1" bar code for "CHANNEL" to select the "A1" programme position.

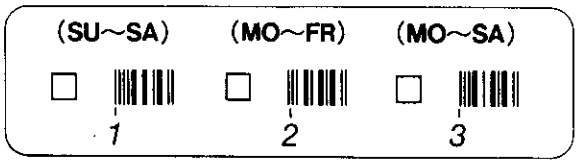


Note:
The "AV 2" bar code cannot be used with this VTR.

Timer Recording (Cont'd)

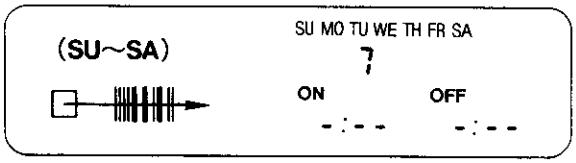
For Everyday Recording

When programming an everyday recording using the bar codes, you have the choice between 3 different modes: Sunday through Saturday *(1)*, Monday through Friday *(2)*, and Monday through Saturday *(3)*.

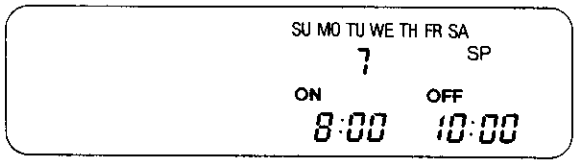


1 Turn on the Digital Scanner and trace the "CHANNEL" bar code.

2 Trace the desired "EVERYDAY" bar code *(1, 2, 3)*.



3 Trace the bar codes for "START TIME", "END TIME" and "RECORDING", and transmit the data to the VTR.

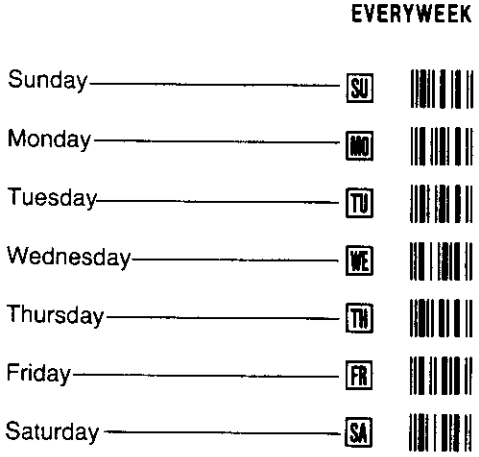


- Everyday recording will be performed from that day on.
- If a "DATE" bar code is traced after tracing the "EVERYDAY" bar code, everyday recording will not be performed.

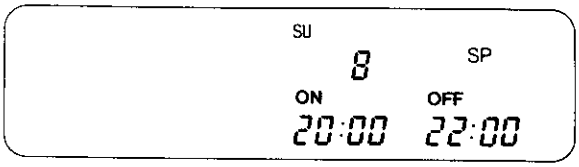
For Everyweek Recording

1 Turn on the Digital Scanner and trace the "CHANNEL" bar code.

2 Trace the bar code for the desired day of the week among the "EVERYWEEK" bar codes.



3 Trace the bar codes for "START TIME", "END TIME" and "RECORDING", and transmit the data to the VTR.

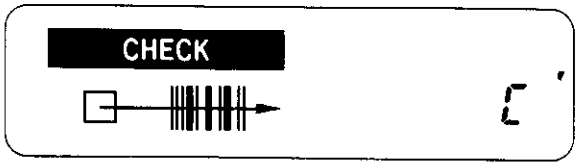


- Everyweek recording will be performed from that week on.
- If a "DATE" bar code is traced after tracing the "EVERYWEEK" bar code, everyweek recording will not be performed.

To Confirm the Programme of a Timer Recording

To perform this operation, the VTR must be turned on or it must be in the timer recording standby mode (◳ indication is lit).

1 Trace the "CHECK" bar code.



2 Perform transmission.
- After releasing the Transmit Button, the programmed data will be displayed for about 12 seconds on the Multi-Function Display.
- At every push of the Transmit Button, the timer programme number advances to the next higher number.

To Cancel a Programmed Timer Recording

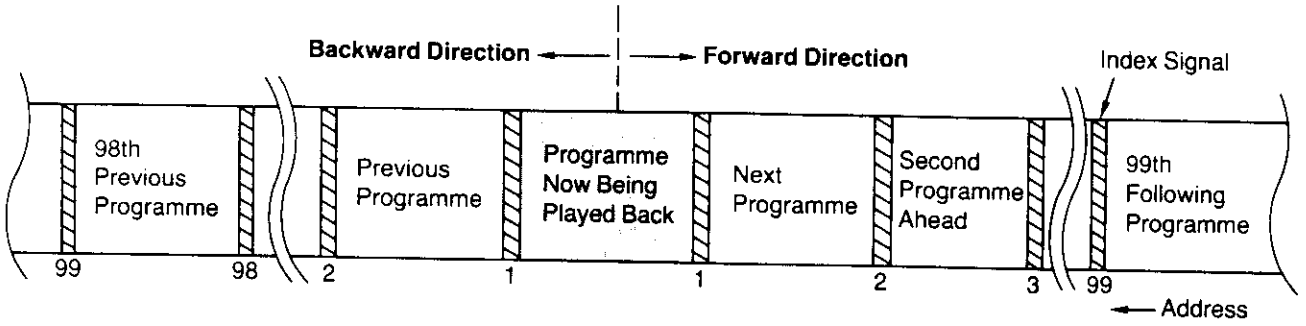
To perform this operation, the VTR must be turned on but not be in any of the recording or playback operation modes, or it must be in the timer recording standby mode (◳ indication is lit). To cancel a programmed timer recording, its data must be displayed on the Multi-Function Display. If they are no longer displayed, first, trace the "CHECK" bar code and perform transmission (several times, if necessary, until the programme you want to cancel is displayed). Then, within 12 seconds:

1 Trace the "CANCEL" bar code.

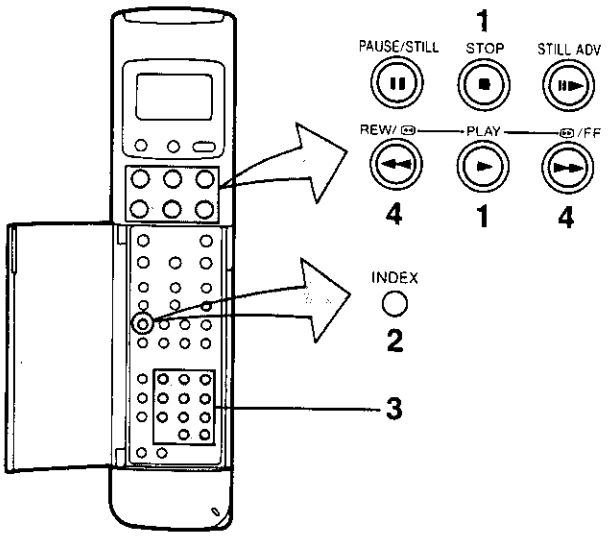
2 Perform transmission.
- To programme a new timer recording, perform the programming from the beginning.

VHS Index Search System

How to Count the Addresses

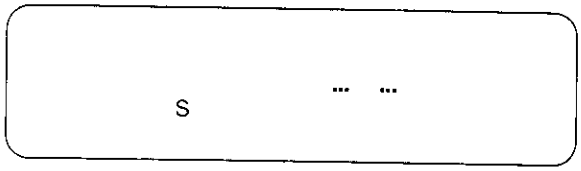


With the VHS Index Search function, up to 99 addresses (places where index signals are recorded) can be skipped to directly locate the beginning of the desired programme in both forward and reverse direction in the Fast Forward or Rewind mode.

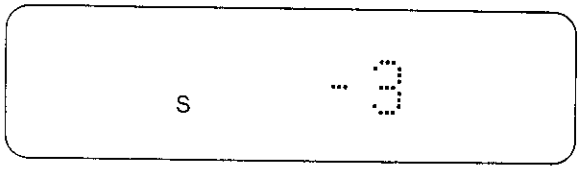


1 Press the Play Button (▶) or Stop Button (■).

2 Press the Index Button. The "S" Indicator lights up.



3 Input the number of programmes that you want to skip by pressing the number buttons.



- If you made a mistake, press the Index Button twice and input the correct number.

4 Press the Rewind ◀◀/Review ⏪ or Fast Forward ▶▶/Cue ⏩ Button to start the VHS Index Search function (the VTR will switch to the rewind or fast-forward mode).

- Every time an index signal (address) is skipped the number in the Address Indication decreases by one.
- When the preset address is reached, the Tape Counter Indication will appear in place of the Address Indication, and the normal playback will start.
- To abort the Index Search function midway, press the Play or the Stop Button.

Recording of Index Signals

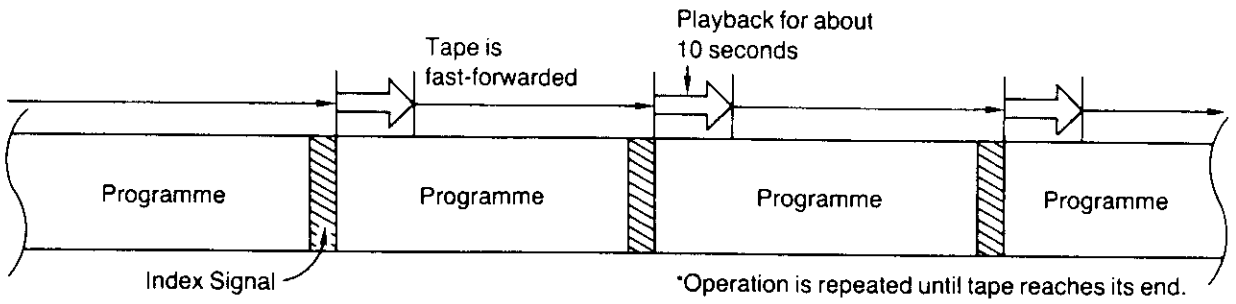
While recording an index signal, the indication "WRITE" on the Multi-Function Display lights up for a few seconds. Index signals will be recorded automatically in the following cases:

- At the tape position at which the Record Button is pressed to start recording.
- At the tape position at which a Timer Recording is started.
- At the tape position at which an OTR recording is started.
- When pressing the Record Button during recording.

- When activating the VHS Index Search function from the Still playback mode, the Playback will start when the selected programme is reached.
- If the VHS Index Search function is started extremely close to the beginning of the next programme (place where an address signal is recorded) or from the beginning of the tape, the first address may not be counted.
- If there are unrecorded parts on the tape, or if recordings have repeatedly been made on the same tape portion, the VHS Index Search function may not work correctly.
- The VHS Index Search function can only count the addresses correctly, if the index signals are spaced at least 3 minutes in the SP mode and 5 minutes in the LP mode.

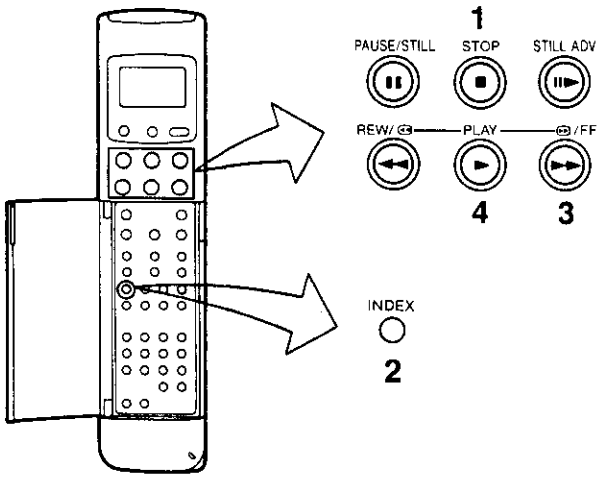
Intro Scan Function

How the Intro Scan Function Works...



The Intro Scan function plays back the first 10 seconds of each programme (recorded with index signal) on a tape one after another. This is convenient for quick checking what programmes are on a tape, or to find the desired instalment of a TV series you have recorded on a tape.

Intro Scan Operation



1 Insert a video cassette.
(Put the VTR in the stop mode.)

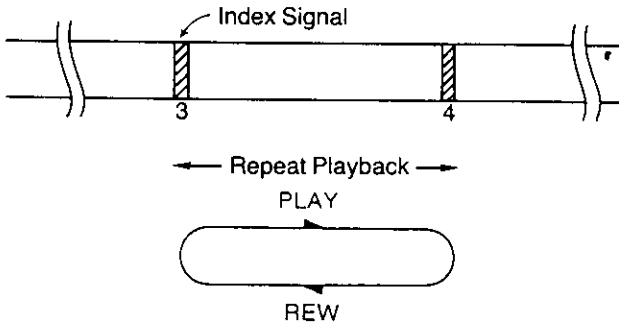
2 Press the Index Button. The "S" Indicator lights up.

3 Press the Fast Forward ▶▶/Cue ⏩ Button.
(The Intro Scan starts.)

4 When the desired scene is reached, press the Play Button (▶).

- The Intro Scan function may not be activated for the first programme recorded close to the beginning of the tape.
- The Intro Scan function may not be activated, if the interval between programme starts is less than 5 minutes in the LP mode, or less than 3 minutes in the SP mode.

Performing Index Repeat Playback



1 Press the Index Button.

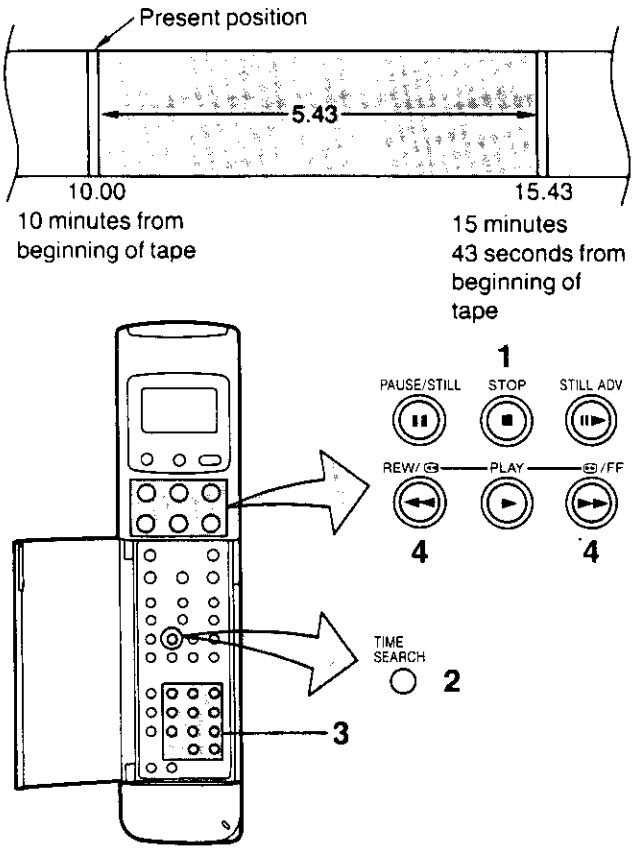
2 Press the Repeat Button. The "RS" Indicator lights up and playback starts.
- When the next index signal is found, the tape will be rewound. When the index signal, where the playback is to start, is found, the playback will restart. In this way, automatically repeated playback can be performed for a tape portion as defined by the number of index signals that are skipped.

3 To stop the Index Repeat playback, press the Stop Button.

If Index Repeat playback is performed on a tape for long periods of time, the picture quality may become inferior.

Time Search

The Time Search function makes it possible to quickly advance the tape from any position by inputting the exact desired amount of playback time of the part that you want to skip.

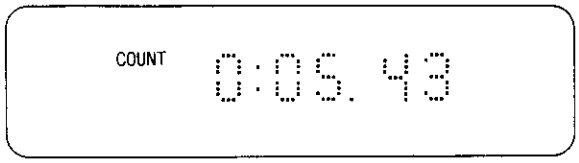


Time Search from the Stop Mode

1 Put the VTR in the stop mode.

2 Press the Time Search Button.
The indication in the Multi-Function Display changes as shown below.

3 Input the time of the desired scene.
- The time is input by pressing the number buttons in the order: hour, minute, second.
- The "–" indicatioin will be counted as "0".



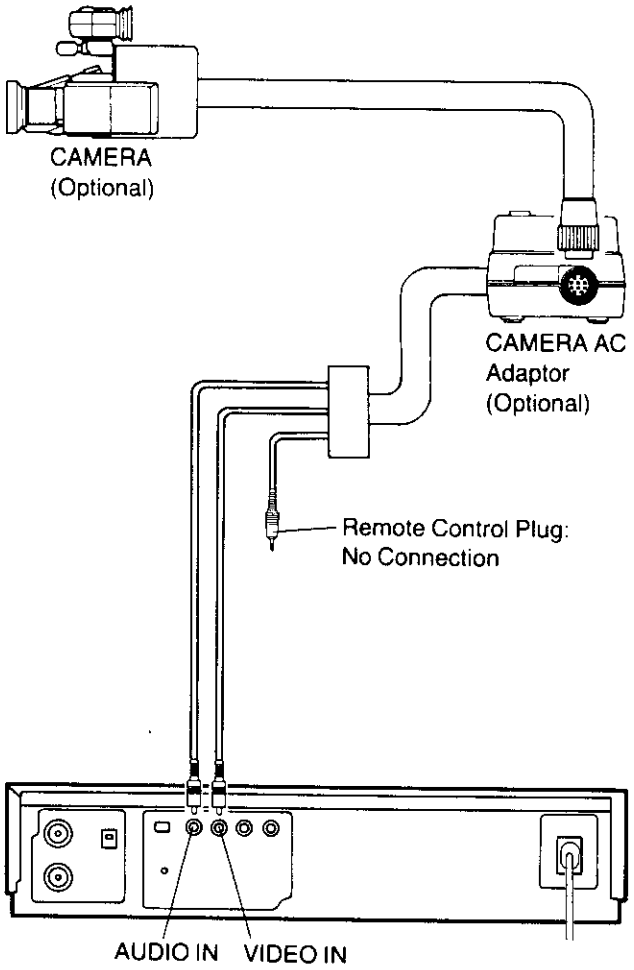
4 Press the Fast Forward ▶▶/Cue ⏩ Button or the Rewind ◀◀/Review ⏪ Button.
The playback starts after rewinding or fast forwarding to the tape position of the designated time.

Time Search from the Play Mode

The operation is the same as that for the stop mode but in operation step 4, the Cue or Review playback is performed to the tape position of the designated time and the playback will then start.
If the time search function is activated during playback, a time of up to 59 minutes 59 seconds can be input.

- The numbers in the Tape Counter do not change during parts of the tape on which there is no recording.
- When the tape is inserted, the Tape Counter will automatically be reset to "0:00.00".

Camera Recording



- If you leave the VTR in the pause mode for more than 5 minutes, the VTR will stop automatically to protect the tape and the video heads.
- Even if the video camera is equipped with video recorder remote control functions, this VTR can not be remote-controlled from the camera.

Preparation

- Connect the Video Camera via the Camera AC Adaptor to the VTR as shown in the illustration above.
- Press the Input Signal Selector on the Remote Controller to select the A1 programme position (or select with the Channel Up or Down Button on the VTR).
- Insert a video cassette with the erasure prevention tab intact.
  When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Set the Tape Speed Selector to "SP" or "LP".

1 Turn the Camera AC Adaptor on and make the necessary adjustments on the camera.
Refer to the operating instructions of the camera you are using.

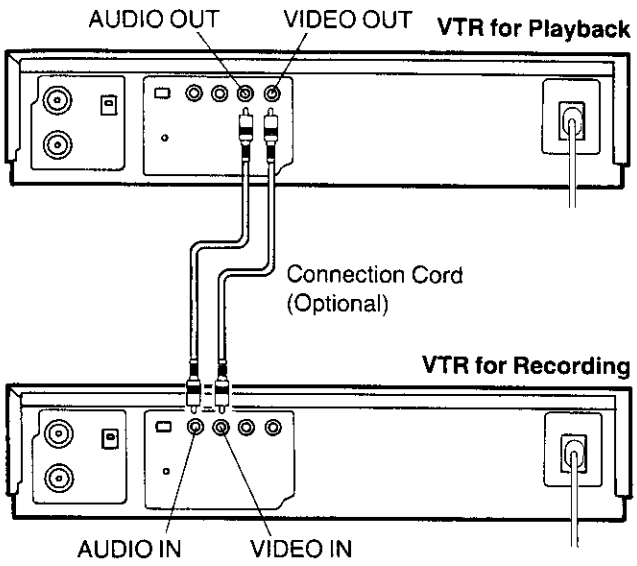
2 Press the Record Button on the VTR to start recording.

Avoid recording unwanted material:
Press the Pause/Still Button (❚❚) of the VTR, and the recording will stop temporarily. To restart recording, press the Pause/Still Button (❚❚), again.

3 Press the Stop Button (■) on the VTR to stop the recording.

Dubbing (Copying)

Dubbing (copying) from one video cassette to another.



Preparation

- Make the necessary connections as shown in the connection diagram.
- Press the VTR On/Off Switches to turn both VTRs on.
- Press the Input Signal Selector on the Remote Controller to select the "A1" programme position (or select with the Channel Up or Down Button on the VTR).
- Make sure that the Noise Filter/Edit Selector of both the recording and playback VTRs (if equipped) are in the "EDIT ON" position. Set these switches to "OFF" for ordinary use of the VTRs.
  (The Noise Filter/Edit Selector is on the front panel.)

1 Place the recorded cassette in the playback VTR and a blank video cassette with the erasure prevention tab intact in the recording VTR.

2 Press the Record Button on the recording VTR.

3 Press the Play Button (▶) on the playback VTR.

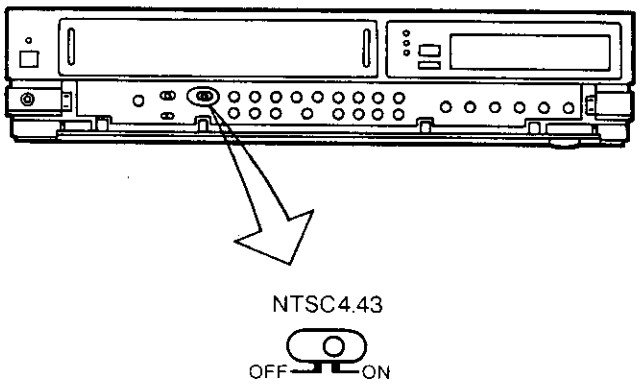
4 Press the Stop Button (■) on both VTRs to stop the dubbing.

- To assure smooth, noiseless cuts when interrupting the recording, always use the Pause/Still Button (❚❚).
- To obtain smooth cuts when starting the recording from the stop mode:
  1. Play back the last part of the previously recorded material to confirm its ending point, and then press the Pause/Still Button (❚❚).
  2. Press the Record Button.
     (The VTR is still in the pause mode.)
  3. To start recording, press the Pause/Still Button (❚❚) again.
- The picture quality of a re-recorded tape is not as good as that of the original.

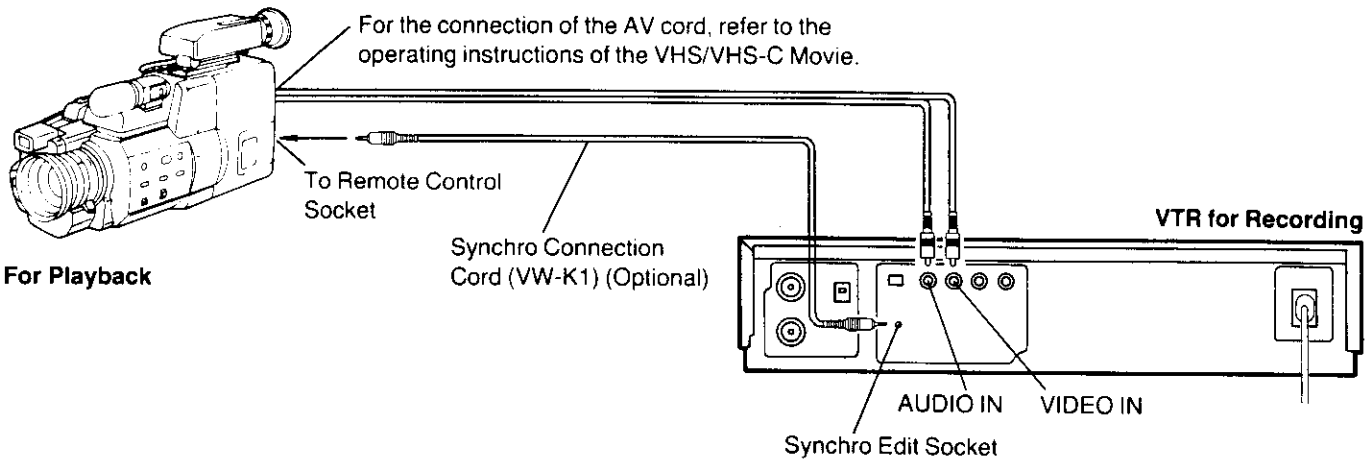
NTSC 4.43 Switch

When dubbing an NTSC system tape, set the NTSC 4.43 Switches on both the recording and playback VTR to "ON".

- When the NTSC Switch is set to "ON", PAL signals cannot be recorded correctly.



Dubbing (Copying) (Cont'd)


For the connection of the AV cord, refer to the operating instructions of the VHS/VHS-C Movie.
To Remote Control Socket
Synchro Connection Cord (VW-K1) (Optional)
For Playback
VTR for Recording
AUDIO IN
VIDEO IN
Synchro Edit Socket

Connecting to a Movie Camera Equipped with Synchro Edit Function

It is possible to synchronize the playback start and stop of the Movie Camera with the recording start and stop of this VTR.

Preparation

- Make the necessary connections as shown in the connection diagram.
- Set the Edit Switch (Noise Filter/Edit Selector) on both the Movie Camera and this VTR to "ON" (or "EDIT ON").
- Press the Input Signal Selector on the Remote Controller to select the "A1" programme position (or select with the Channel Up or Down Button on the VTR).

1 Put the VTR in the recording pause mode.

2 Put the Movie Camera in the still playback mode.
- Put the Movie at the point where you want to start editing into the still playback mode.

3 Press the Pause/Still Button on the VTR.
- The Movie Camera changes over to the playback mode and the dubbing will start automatically.

To Leave Out Unwanted Scenes

1 Press the Pause/Still Button on the VTR.
The VTR changes over to the recording pause mode and the Movie Camera changes over to the still playback mode.

2 Operate the Movie Camera to skip the unwanted scenes and then put it in the still playback mode again.

3 Press the Pause/Still Button on the VTR.
- The dubbing will restart.

To stop the dubbing, press the Stop Button on the VTR and then put the Movie Camera in the stop mode.

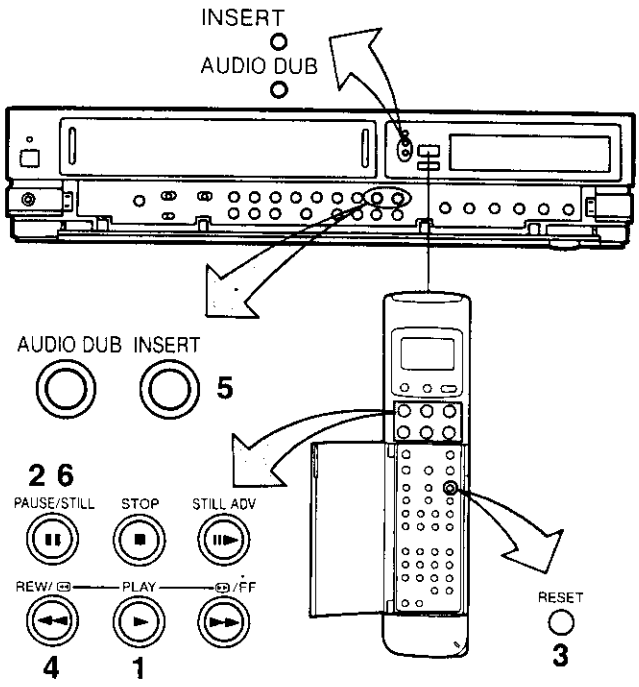
Synchronized Editing between the VTRs

When editing from another VTR equipped with Synchro Edit Socket, synchronised start and stop of both VTRs can be activated from this VTR.

The operation is the same as described on the left for synchronized editing from a Movie Camera.

Insert Editing

Insert Editing is an editing system that allows replacing scenes on a previously recorded tape by newly recorded scenes or titles.
It is possible to record new sound at the same time.



Preparation

- Insert a video cassette with the erasure prevention tab intact.
- When performing insert editing from another VTR, set the Noise Filter/Edit Selector to "EDIT ON".
- Press the Input Signal Selector on the Remote Controller to select the programme position according to the type of insert editing to be performed.(Or select with the Channel Up or Down Button on the VTR.)

  1~99: When inserting picture and sound from a TV programme.

  A1: When inserting picture and sound from equipment connected to the Video Input Socket and the Audio Input Socket.

1 Press the Play Button.

2 Locate the tape position where you want the insert editing to end, and press the Pause/Still Button to put the VTR into the still playback mode.

3 Press the Reset Button (Remote Controller) to reset the Tape Counter to "0:00.00".

4 Perform review playback to locate the tape position where you want the insert editing to start and put the VTR into the still playback mode.

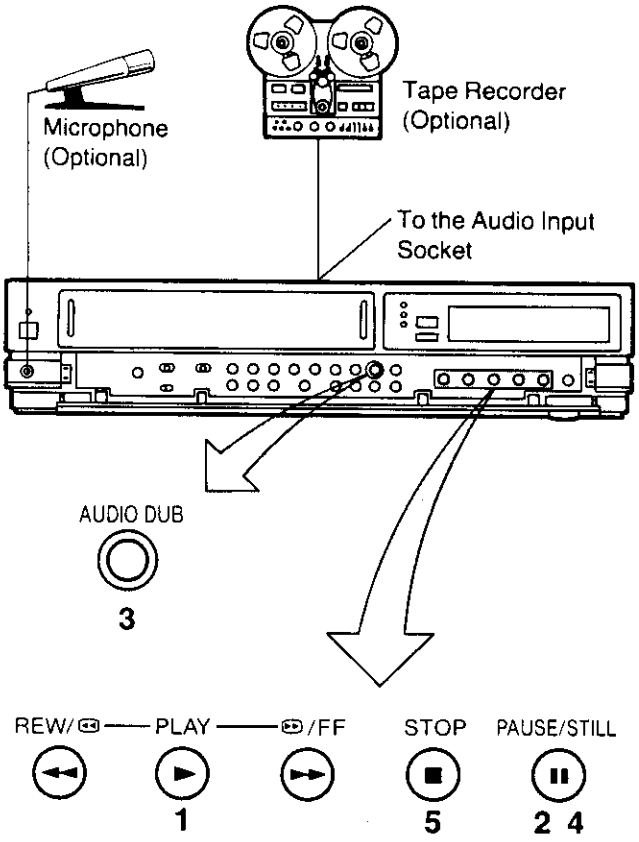
5 Press the Insert Editing Button.
(The Insert Editing Indicator lights up.)
To simultaneously insert new sound, press the Audio Dubbing Button.
(The Audio Dubbing Indicator lights up.)

6 After the picture to be inserted is prepared, press the Pause/Still Button (❚❚).
(The insert editing will start.)
- The insert editing will end at the point where the Tape Counter indicates "0:00.00", and the editing VTR will stop in the still playback mode.

- It is not necessary to operate the Tape Speed Selector.
- The picture quality of an inserted part is always somewhat inferior to that of the original.
- Avoid performing insert editing repeatedly on the same part of the tape because the picture quality of that part becomes inferior.
- The inserted picture may contain slight colour noise or the colours may be unstable.
- If insert editing is performed on a tape recorded in the NTSC system, the insert editing function will not work correctly.

Audio Dubbing

Note that the original sound will be completely erased during audio dubbing.



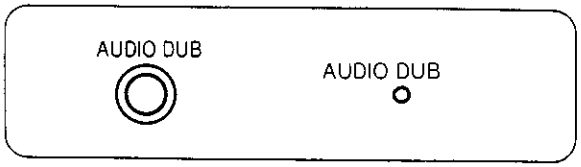
Preparation

- Press the Input Signal Selector on the Remote Controller to select the "A1" programme position (or select with the Channel Up or Down Button on the VTR).
- Insert a video cassette with the erasure prevention tab intact.
  When a video cassette is already inside the VTR, press the VTR On/Off Switch to turn it on.
- Turn the TV set on and select the video playback channel.

1 Press the Play Button (►) to look for the point where you want to start the audio dubbing.

2 Press the Pause/Still Button (❚❚) at the exact point where you want to start the audio dubbing.

3 Press the Audio Dubbing Button (the indicator will light up).



4 Press the Pause/Still Button (❚❚) once again to release the tape from pause, and at the same time start the operation of the audio source. The audio dubbing will start.

5 Press the Stop Button (■) to stop the audio dubbing.

- When a microphone is used for dubbing, do not place it near the speaker of your TV to prevent howling noise (acoustic feedback).
- If the erasure prevention tab of the cassette is missing, no audio dubbing can be made.
- If audio dubbing is performed on a tape recorded in the NTSC system, the audio dubbing function will not work correctly.

Before Requesting Service

Before requesting service, check the following points once again.

SYMPTOM	CAUSE	REMEDY
Power doesn't turn on.	Mains lead is not connected.	Connect mains lead to mains outlet.
	The Timer Record Function is set to "On".	Set the Timer Record Function to "Off".
Power is on but unit doesn't operate.	Safety devices are operating.	Turn off the VTR On/Off Switch, disconnect mains cord from outlet, then reconnect mains cord to mains outlet and turn on the VTR On/Off Switch again.
	Dew condensation inside the VTR.	Wait until the Dew Indicator "⌂" goes off.
VTR has turned itself off.	Safety devices are operating.	Turn the VTR on agian by pressing the VTR On/Off Switch.
TV programmes cannot be recorded.	Connection of aerial lead is not correct.	Connect aerial lead correctly.
	Reception channel is not properly tuned.	Tune reception channel.
OTR Function (One-Touch Timer Recording) cannot be performed.	Clock is flashing "0:00".	Set clock to present time.
Unattended timer recording cannot be performed.	Recording start or recording stop time setting is incorrect.	Set recording start and recording stop time correctly.
	The Timer Record Function is set to "Off".	Set the Timer Record Function to "On".
	Clock shows incorrect time.	Adjust clock to present time.
	Clock is flashing "0:00".	Set clock time and perform timer setting.
Recording via external input terminals cannot be performed.	The programme position "A1" is not selected.	Select the programme position "A1".

Before Requesting Service (Cont'd)

SYMPTOM	CAUSE	REMEDY
Playback picture is not in colour. Playback picture has large amounts of "snow".	Reception channel was not adjusted correctly during recording.	Readjust reception channel correctly.
	TV set is not properly tuned to the video playback channel of the VTR.	Properly tune the TV set to the video playback channel of the VTR.
	The video heads are clogged with dirt.	Consult qualified service personnel.
	The video heads are abraded.	Consult qualified service personnel.
	Tape is old and/or defective.	Use new tape.
Remote Controller does not work.	Remote Controller is not being pointed at Infra-red Receiver Window on the VTR.	Point the Remote Controller at Infra-red Receiver Window on the VTR.
	Distance is too far.	Use the Remote Controller within 7 m from the VTR.
	An obstacle is between Remote Controller and VTR.	Remove obstacle.
	Batteries are exhausted.	Replace batteries.
	Battery polarities (+, −) are reversed.	Insert batteries correctly.
Bar code reading with Remote Controller is impossible.	The Remote Controller is in the power-saving standby condition.	Press the Digital Scanner On/Off Button to turn it "ON" again.
	The bar code has been traced too slowly.	Trace the bar code quickly.
	The bar code was not traced all the way from the Small Box past the last bar.	Trace the bar code correctly.
	The bar code was not traced straight.	Trace the bar code straight from left to right.
	The Bar Code Reading Section is clogged with dirt.	Clean the Bar Code Reading Section. (See page 7.)
Transmission from the Remote Controller to the VTR cannot be performed.	The VTR is turned off.	Turn the VTR on.
	The VTR is in an operation mode.	Put the VTR into the stop mode.
	There is no unoccupied timer programme number left.	A maximum of 8 timer recordings can be programmed at the same time.
	Reading a bar code was not followed by a "beep" sound from the Remote Controller.	Perform the bar code reading again.
	The transmission was not followed by a repeated "beep" sound from the VTR.	Keep pressing the Transmit Button until the confirmation sound is heard.

Specifications

NV-J45A, EA

Information for Your Safety

Power Source:	NV-J45A; 240 V AC 50–60 Hz NV-J45EA; 230 V AC 50–60 Hz
Power Consumption:	Approx. 24 watts
Video Recording System:	2 rotary heads, helical scanning system
Video Heads:	4 heads
Tape Speed:	SP; 23.39 mm/sec. LP; 11.7 mm/sec.
Tape Format:	VHS tape
Record/Playback Time:	SP; 240 min. with NV-E240(VHS) LP; 480 min. with NV-E240(VHS)
FF/REW Time:	Approx. 2.5 min. with NV-E180
VIDEO	
Television System:	CCIR; 625 lines, 50 fields, PAL colour signal
Modulation System:	Luminance; FM azimuth recording Colour signal; converted subcarrier phase shift recording (PAL, CCIR)

Input Level:	VIDEO IN (PHONO);	1.0 Vp-p,	75 ohm, terminated
Output Level:	VIDEO OUT (PHONO);	1.0 Vp-p,	75 ohm, terminated
	RF Modulated; NV-J45A:	VHF channel 0 or 1,	75 ohm, unbalanced
	NV-J45EA:	VHF channel 2 or 3,	75 ohm, unbalanced

AUDIO

Input Level:	AUDIO IN (PHONO);	−10 dB,	more than 50 kohm, unbalanced
	MICROPHONE;	−70 dB,	more than 600 ohm
Output Level:	AUDIO OUT (PHONO);	−6 dB,	less than 1 kohm, unbalanced

Audio Track:	1 track (Normal-mono only)
Video Horizontal Resolution:	Colour; more than 240 lines (SP)
Signal-to-Noise Ratio:	Video; more than 43 dB (SP) Audio; more than 43 dB (SP)
Audio Frequency Response:	80 Hz–10 kHz (SP)
Operating Temperature:	5°C–40°C
Operating Humidity:	35%–80%
Weight:	5.0 kg
Dimensions:	380 (W)×82 (H)×344.5 (D) mm
Standard Accessories:	1 pc. DIN-DIN Coaxial Cable 1 pc. Remote Controller 2 pcs. "R6" size batteries 1 pc. AC Mains Lead

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.